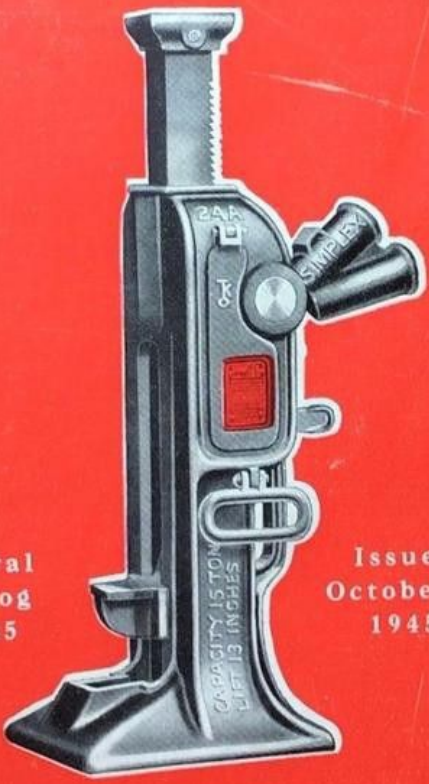
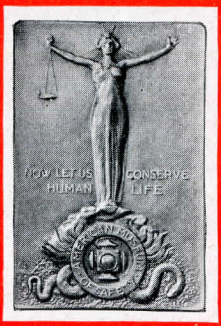
Simplex Jacks



General Catalog No. 45

Issued October 1, 1945

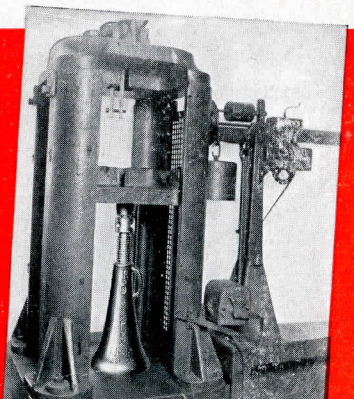
SIMPLEX
JACKS
CATALOGUE
COVERS LOST
$1.50 Hunt's Auctions, Vt.
June 2006



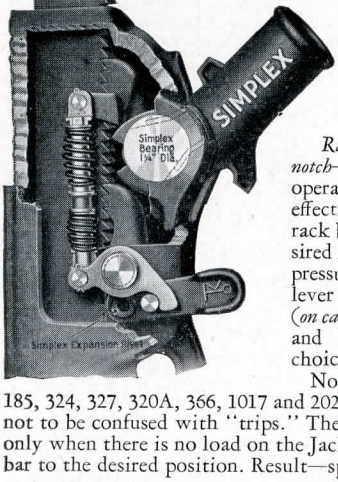
The Only Gold Medal for the Safety of Jacks was Awarded to Simplex

Simplex Jacks are manufactured with care and precision, on a production basis, insuring greatest value at lowest cost. The Engineering Department studies and tests each new development under working conditions, accepting or rejecting changes as dictated by their findings and experience. Our modern manufacturing processes are designed to provide the best product—Simplex Jacks are not just so many cast or forged parts put together—the design and material specifications of every part is made to render the utmost in service, provide safety and minimize the operating effort required. Metallurgical analyses and tests and laboratory-controlled heat-treatment assure maximum service life and safety. The Testing Department puts each jack through compression, tension and torsion tests. *Each jack* must lift and hold its full rated capacity plus a safe overload.

Design, material specifications, tests and inspections, exclusive with Simplex Jacks, resulted in the American Museum of Safety Gold Medal being awarded to Simplex Jacks.



Simplex Jacks



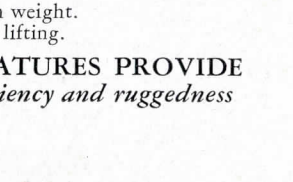
Simplex Ratchet Lowering Jacks

Raise or lower the load notch by notch—cannot be tripped. They operate only on the downward or effective stroke of the lever. The rack bar can be pulled up to the desired lifting position (against spring pressure) without operating the lever socket. Safety, lifting range (*on cap and toe*), speed with efficiency and ruggedness make them the choice of industry.

Nos. 24A, 84A, 85A, 86A, 32, 185, 324, 327, 320A, 366, 1017 and 2029 have *speed triggers*, which are not to be confused with "trips." The speed trigger can be operated only when there is no load on the Jack, and is used to drop the rack bar to the desired position. Result—speed with safety.

Check these 12 design, construction and operating features:

1. Vertical multiple-toothed pawls—greater contact area with the rack bar.
2. Drop forged alloy steel heat-treated parts—minimize wear.
3. Precision machining throughout.
4. Large arched inner-ribbed bases—insure a firm and unbendable foundation.
5. Every Jack built and throughly tested to lift its full rated capacity *on the toe or cap.*
6. Unbreakable trunnions—no fulcrum pins—see illustration.
7. Simplified mechanism—economy.
8. Expansion rivets—no machine screws used as they result in loose or lost parts.
9. New simplified side plates.
10. Cadmium plated steel springs—corrosion resistant.
11. Maximum strength— minimum weight.
12. Shorter fulcrum centers—easier lifting.



THESE SIMPLEX FEATURES PROVIDE
the greatest safety, efficiency and ruggedness

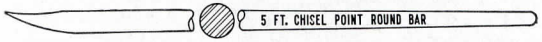
Operating Instructions

Every Simplex Lever Jack is built to lift a 50% overload on the cap and to lift its full rated capacity on the toe. Select a Jack of the proper type and capacity. Conservative estimates of the weight to be lifted should be practiced, and if more than one Jack is used it is important that they lift in unison.

Jacks (cap or toe lift) should always be centered under the load.

Don't lift metal against metal—use wood shims. The foundation under the Jack is very important, as the Jack is unduly stressed if the load is not lifted straight up and may kick out from under the load.

Lever recommendations:



For Industrial purposes—round steel

For Railway car repairs—oval hickory poles

Use the proper lever—wrong sizes can slip and damage lever socket. Simplex levers are designed to bend before the maximum strength of the Jack is reached. Hickory lever poles should be inspected from time to time. Remove the lever from the socket after the lift is made. Don't set the Jack in lowering position until you are ready to lower the load. It is better to make a short lift and use blocking rather than attempt too much lift at one setting, particularly on heavy loads. After the load has been raised, it should be securely cribbed or blocked.

MAINTENANCE

Keep rack bar teeth clean and pawl seat free from grit.

Trunnion bearings should be cleaned and new grease added at least once a year (depending on amount of use).

The rack bar should always be greased *except* on the toothed side (U. S. Graphite No. 1).

Do not allow caked grease to accumulate on the spring link. Wash with kerosene and blow out with air.

Check overplay—when the pawls "click," the socket should be at least $\frac{1}{2}$" away from the housing on both the up and down strokes. Less than $\frac{1}{2}$" indicates wear, and the worn operating parts should be replaced before using the Jack.

Jacks that are out of order should be tagged accordingly and not used until repairs are made.

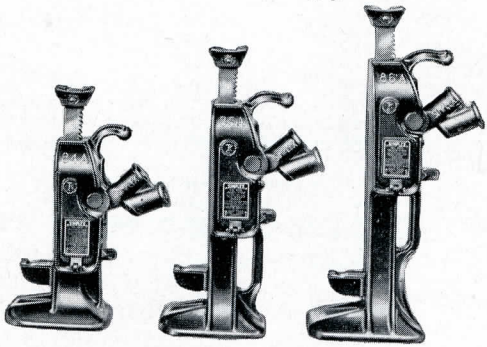
REPAIR

Write for Repair and Maintenance Catalog No. 45.

Repaired Jacks should be tested before going back into service.

Simplex Jacks

5 Ton — Single Acting Ratchet Lowering Jacks



5 Ton — Nos. 84A, 85A, 86A and 185

For contractors, mines, shop, track work, mill and factory. A few features follow: double lever sockets—stronger cadmium plated springs and links—shorter fulcrum centers—longer and wider concave rack bar toe lifts—larger trunnion bearings—larger and stronger pawls—reinforced inner-ribbed housings—and greater inbuilt strength. All parts are interchangeable except the housings and rack bars. Widely used for re-railing mine locomotives, mine track work, and for lifting and moving mechanical mining equipment.

Fast operating—light weight—cap and toe lift—efficient and ruggedly constructed.

The minimum toe lifting height of these Jacks is $1\frac{3}{4}$".

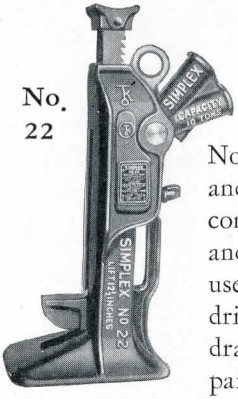
Nos. 84A and 86A are recommended respectively for thin and thick coal seam operations; No. 85A for average coal seam work.

The No. 185 is furnished with an adjustable (*drop forged*) Auxiliary Cap Shoe providing four adjustments. Loads can be lifted at a right angle to the operator on the Auxiliary Shoe. Cap is non-rotating. Recommended for speed and ruggedness.

Jack No.	Capacity Tons	Height Inches	Lift Inches	Lever Inches	Weight Pounds	Code	List Price
84A	5	14	7	30	28	**Hdxrd**	$19.00
85A	5	17	10	30	30	**Hexrd**	20.00
86A	5	20	13	36	35	**Hfxrd**	23.00
185*	5	17	10	36	33	**Losho**	23.00

*Deduct $1.00 from the list price of the No. 185 if the Auxiliary Cap Shoe is not desired. All have safety Speed Triggers and double lever sockets.

Simplex Jacks



No. 22

10 Ton — Single Acting Ratchet Lowering Jacks

Nos. 22 and 1017—For heavy road and mining equipment, rigging, contractors, mill and factory work and shipbuilding. The No. 22 is used extensively with oil and other drilling equipment and for railroad draft gear, bolsters and coupler repairs. It has speed with lifting range.

The No. 22 is the most popular all-around Jack for maintenance service in all types of industry—textile mills, metal working plants, printing plants and wherever machinery, heavy crates, etc. require moving. No. 1017 lifts easier and is lighter in weight. It has a safety speed trigger.

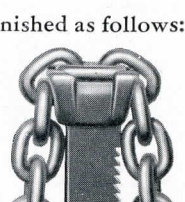
Jack No.	Capacity Tons	Height Inches	Lift Inches	Toe Lift Min.	Steel Lever Bar Inches	Weight Pounds	Code	List Price
22	10	21¼	12½	2⅛	60	58	**Twoto**	$32.00
1017	10	17	9½	1¾	60	40	**Aoagr**	28.00

Non-rotating chain caps can be furnished as follows:

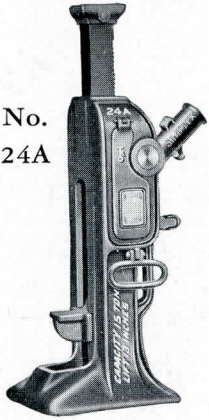
Nos. 84A, 85A and 86A for 7/16″ BBB Chain at $2.00 list.

No. 22 for 1/2″ BBB Chain at $3.00 list.

No. 24A for 5/8″ BBB Chain at $3.00 list.



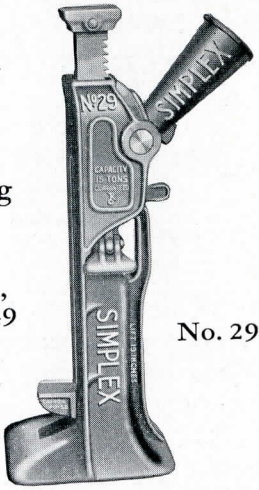
Simplex Jacks



No. 24A

15 Ton Single Acting Ratchet Lowering Jacks

Nos. 24A, 29 and 249



No. 29

Originally designed for railroads, No. 24A for bridge work and the No. 29 for empty car repairs and doing these jobs efficiently—the reputation of these Jacks has spread until they are universally used by riggers, contractors, mines, mills and for heavy operations in all industry. The minimum toe lifting height of both Jacks is 2½". Their portability and balance appeal to all operators.

The No. 24A has features of the new heavy duty No. 2029. (See page 7)—the "huskiest" ratchet lowering Jack.

The No. 29 is particularly recommended for faster and higher lifting. The oval socket and oval poles are recommended for car repairs.

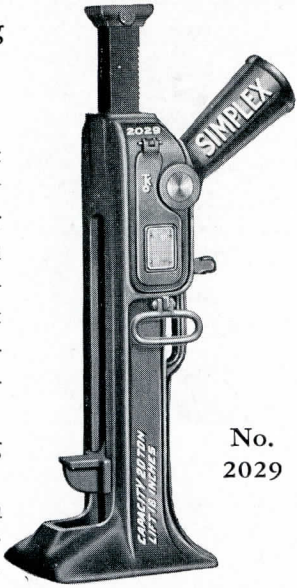
The No. 249 lifts 24½" and has a shortened base in order to get the toe lift close to the load.

Jack No.	Capacity Tons	Height Inches	Lift Inches	Weight Pounds	Code	List Price
24A	15	23¼	13	90	**Bdaov**	$50.00
29	15	28¼	19	96	**Karov**	52.00
249	15	35	24½	114	**Boiov**	60.00

Nos. 24A, 29 and 249 furnished with oval or round sockets and 6-ft. oval or round hickory poles or 1¼" round double socket, 5-ft. steel lever bars or with square socket for your lining bars. If the lever is not desired, deduct $2.00 from the list price.

Simplex Jacks

20 Ton — Single Acting Ratchet Lowering Jack



No. 2029

No. 2029 Simplex, the most efficient and rugged railway refrigerator and empty car jack. Lifts 37% easier than the No. 29. Also recommended for rigging, street railways, utilities, machinery movers and heavy construction work.

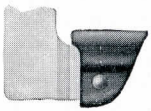
The minimum toe lifting height is 2½".

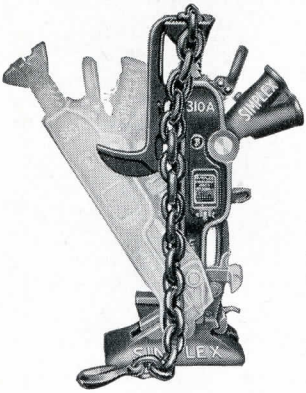
Use these Jacks in pairs, in lieu of overhead cranes, for loading or unloading heavy machines, equipment, or large forgings and castings.

Jack No.	Capacity Tons	Height Inches	Lift Inches	Weight Pounds	Code	List Price
2029	20	28¼	18	104	**Bobio**	$58.00

No. 2029 furnished with oval or round socket and with 6′ oval or round hickory pole, 1¼" round double socket with 6′ steel lever bar or with square socket for your lining bars.

An Auxiliary Shoe, with broad lifting face, 3" x 5", to avoid crushing the face of timbers, can be attached to the Nos. 22, 29, 84A, 85A, 86A, 185 and 1017, and a 4" x 5" Auxiliary Shoe can be attached to the Nos. 24A and 2029, at $2.00 additional to the list.





No. 310A

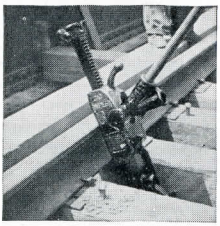
15 Ton
Emergency Jacks
Single Acting
Ratchet Lowering

No. 310A, 15-tons capacity, is the late model of the original tilting Emergency Jack, the standard Jack in the oil fields and the choice in many industries.

It lifts vertically and lifts or pushes at any angle. Objects can be lifted or pushed on the rotating cap of the Jack, on the corrugated toe lift, on the auxiliary cap shoe (two positions) or from any intermediate height by using the chain as a sling. Any link of the chain can be engaged in the recessed cap. Loads can be raised or lowered the full limit of the rack bar when the Jack is operated at an angle. *Double lever socket provides for close quarter operation.*

The No. 310A supersedes the No. 310. In addition to maintaining the features of the No. 310, the No. 310A lifts 37% easier, has a greater base area, eliminates stooping over as the base locking hook can now be foot-operated, has a more convenient carrying handle, a longer and wider machine corrugated rack bar toe lift, a greater overload capacity and greater inbuilt strength.

Simplex Jacks

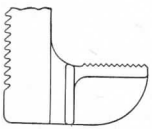


For railroad bridge work, specify the No. 310, which has the general specifications of the 310A, with 3⅞″ or 5″ base width which permits operation between ties on trestles.

It is not possible to use the 310A for this purpose because of its width.

The 5′ chain has a grab hook on one end.

This chain has numerous other lifting, snubbing and pulling uses around bridges and viaducts, construction and maintenance jobs.



Machine corrugated toe lift of No. 310A. This safety feature prevents loads from slipping off. Especially helpful in toe lift jacking at an angle.

Jack No.	Capacity Tons	Height Inches	Lift Inches	Toe Lift Min.	Weight Pounds	Weight Complete	Code	List Price
310*	15	24¼	13	2¼	66	101	**Univo**	$62.00
310A	15	22	14	2¼	74	109	**Caoag**	62.00

*Specify 3⅞″ or 5″ base.

If complete equipment is not required for the 310A deduct $2.00 for the lever (weight 16 lbs.); $4.50 for the auxiliary cap shoe (weight 5½ lbs.); $5.50 for the 5′ ½″ BBB chain (weight 13¾ lbs.).

Simplex Jacks

No. 126

No. 135

25 and 35 Ton — Single Acting — Geared Ratchet Lowering Jacks
Nos. 125, 126 and 135

25 Ton, Nos. 125 and 126—the powerful geared type mechanism of these jacks provide both speed and ease in heavy lifting. Will lift the load much faster than Standard Speed Jacks. Simplex integrally keyed pinions and gears have been in service in these Jacks since 1914 *without a single failure.*

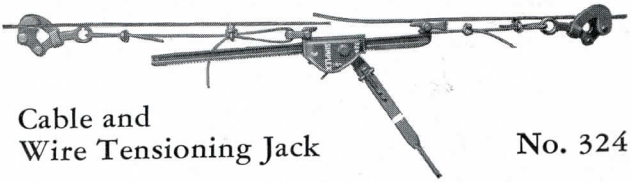
No. 126 has large (3″x3¾″) toe lift. For drag line, trencher and power shovel repairs, heavy construction, skidding oil field rigs, pulling casing, for heavy structural work, steel mill, forge shop, riggers and foundry use.

Nos. 125 and 135 do not have a toe lift. Extensively used for refrigerator and loaded car repairs.

Jack No.	Capacity Tons	Height Inches	Lift Inches	Toe Lift Min.	Weight Pounds	Code	List Price
125	25	26½	15½	—	168	**Gekar**	$132.00
126	25	27½	12½	3″	192	**Geovl**	145.00
135	35	27	16	—	228	**Gerlo**	178.00

Furnished with 6′ oval hickory poles.

Simplex Jacks



Cable and Wire Tensioning Jack — No. 324

The No. 324—Single Acting—Ratchet Releasing Jack is sufficiently powerful to easily pull overhead and underground cables and to take up slack in trolley, guy and transport wires. Weighing only 13 pounds, it does not handicap a man in overhead work. The speed trigger permits instant slack "take up" at any point when the jack is not under load. The steel lever is furnished with a safety spring clip that prevents it from coming out.

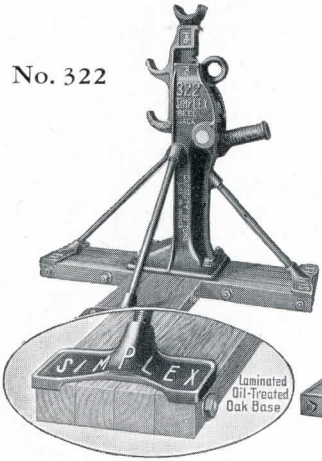
The Jack is easy to set up because of its non-flexible rack bar. *It exerts a direct line pull.*

For tensioning bare wire, use two bare wire grips and two wire slings. (See illustration.) When used for splicing overhead cable, special equipment consisting of two double eye split cable grips, two three-bolt clamps and two wire slings, is required. For grips, or come-alongs, please refer to your line material catalog.

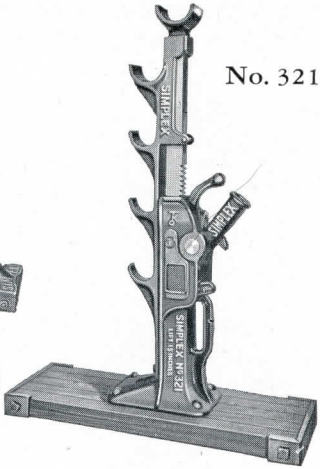
Jack No.	Capacity Tons	Travel Inches	Weight Pounds	Code	List Price
324	2	20¼	13	Aeria	$23.00

Simplex Jacks

No. 322



No. 321



Cable, Rope and Belting, Reel or Drum Jacks

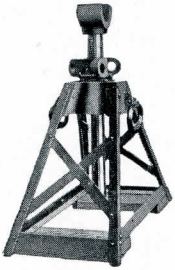
Nos. 320A, 321 and 322

Anything on spools, drums or reels can be paid out faster, safely and productively with Simplex Reel Jacks. For outside work where the footing is uneven, use the Simplex No. 322. Its "T" shaped base, with the 3 threaded and adjustable tie rods, insures a firm, non-rocking foundation. (*Base area 319 sq. inches*). Made with right and left-hand bases so operators can lift in sight of each other for even jacking. For reels 36″ to 84″ in diameter. Lifts or lowers on both upward and downward stroke of lever. Has three lifting hooks, one for 3″ and two for 2½″ spindle.

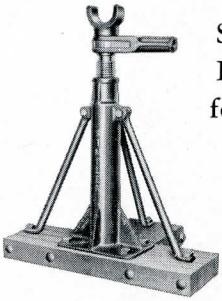
Nos. 321 and 320A are recommended for shop or warehouse use; No. 321 handles reels from 20″ to 96″; No. 320A reels from 20″ to 60″. Both are single acting. No. 321 has five lifting hooks, one for 3½″, one for 3″ and three for 2½″ spindles. No. 320A has three hooks, one for 2½″ and two for 2″ spindles.

All Simplex Reel Jacks are equipped with laminated, oil treated oak bases for protection against splitting and warping caused by exposure to weather.

Simplex Jacks



No. 1CR



No. 3CR

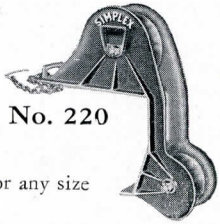
Screw Type Reel Jack—for Economy

No. 1CR for reels 40″ to 60″ in diameter, No. 2CR for 60″ to 92″ reels. The 3-Way nut makes it possible to operate the Simplex more easily and faster than any other "A" frame screw type reel Jacks. Nos. 1CR, 2CR and 3CR have 1 spindle cap for 2¼″ spindles. The No. 3CR, for reels 50″ to 84″ in diameter, is recommended for heavy duty field work. *The braced "T" base has an area of 240 sq. inches.* The ratchet lever socket makes it faster operating than Nos. 1CR or 2CR.

Jack No.	Capacity Tons	Height Inches	Lift Inches	Weight Pounds	Length of Lever	Code	List Price Each
1CR	5	19¾	11½	60	.....	**Crone**	$24.00
2CR	5	30½	16½	88	.....	**Crtwo**	32.00
3CR	15	25½	17½	72	42″	**Ccrxy**	37.00
320A	5	21	10	48	30″	**Cablo**	38.00
321	10	34¼	15	108	60″	**Cabac**	64.00
322	10	29	13¾	104	60″	**Cabre**	70.00

Simplex Manhole Sheave

Extremely handy for pulling cable or carrying the winch line at right angles. Used on the end of a truck or over the edge of a manhole in connection with a snatch block in the manhole, eliminating the use of manhole skids.



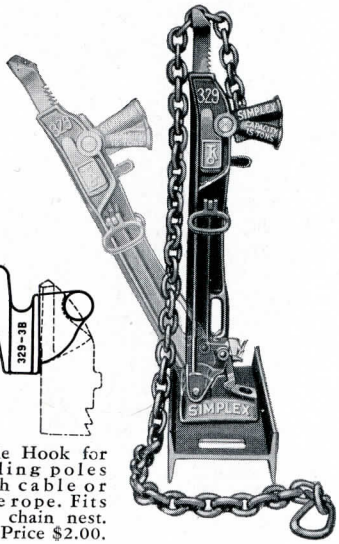
No. 220

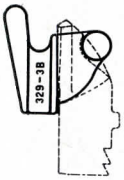
Will handle cable up to 3″ in diameter, or any size winch line.

Jack No.	Large Sheave		Small Sheave		Weight Pounds	Code	List Price
	Dia. Inches	Width Inches	Dia. Inches	Width Inches			
220	7¾	3	4¾	3	100	**Mansh**	$50.00

Furnished with a ¼″ chain, 24″ long, with special hook, as shown, for anchoring when winch line is released suddenly.

Simplex Jacks





Cable Hook for pulling poles with cable or wire rope. Fits into chain nest. List Price $2.00.

Pole Pulling and Straightening Jacks

Nos. 329 and 325

No. 329

They cut costs and reduce "out of service" hours for light, power, telegraph, telephone, railroad and street railway companies.

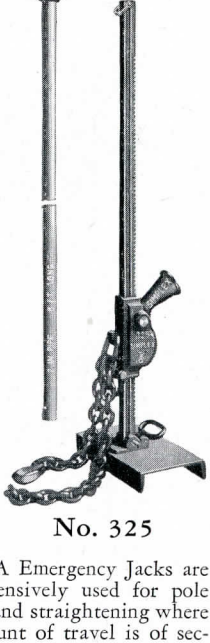
One or two men can pull or straighten poles, pull butts or move loaded poles without interruption to service and without digging, regardless of the size of the poles, or depth in the ground.

No. 329 is the standard Jack of the Bell Telephone Systems and will pull or straighten any pole. The No. 329 is single acting, ratchet lowering.

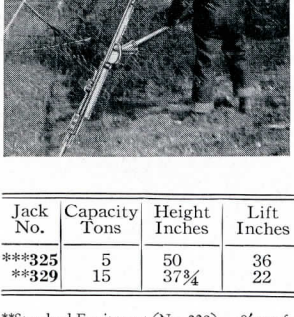
The "H" beam sub-base provides a non-slip and firm foundation.

Simplex Jacks

No. 325, Simplex Junior Pole Jack, is used for poles up to 30 feet in height. Also used as a guy line tightener and for pulling underground cables. The 8′ pike pole furnished with the No. 325 is especially handy when it is necessary to straighten poles located beside ditches. Recommended for rural electrification. It is single acting, ratchet lowering.



No. 325



No. 310A Emergency Jacks are also extensively used for pole pulling and straightening where the amount of travel is of secondary importance.

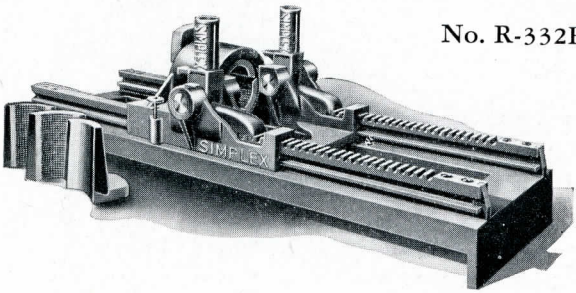
Jack No.	Capacity Tons	Height Inches	Lift Inches	Weight Pounds	Weight Complete	Code	List Price
***325	5	50	36	34	98	**Poguy**	$58.00
**329	15	37¾	22	95	193	**Polot**	85.00

**Standard Equipment (No. 329) — 8′ scarf-welded BBB heat treated steel chain, fitted with pear-shaped link; 10″x24″ I-beam sub-base with hand hole; and 5′ steel lever bar that is tapered and heat-treated. If complete equipment is not required, deduct from list price—$7.00 for chain; $5.00 for I-beam sub-base; $2.00 for lever bar.

Optional Equipment (No. 329) Special, 8′ long, ⅝″ *double strength heat treated alloy steel chain* with pear-shaped link—List Price $18.00.

***Standard Equipment (No. 325) — 5′ steel pinch bar lever that is tapered and heat-treated; 5′ steel chain; an 8″x15″ steel channel base; and 8′ pike tube (seamless tubing), equipped with a malleable iron forked cap for biting into wood for straightening poles. If complete equipment is not required, deduct from list price—$8.50 for pike pole; $3.00 for base; $4.50 for chain; $2.00 for lever bar.

Simplex Jacks



No. R-332R

Double Leverage Pipe Pushing and Pulling Jacks Nos. R-332R and R-334R

R-332R and R-334R have reversible carriages which overcome the necessity of reversing the complete Pipe Pusher to *pull* pipe.

The double levers and double rack of the Simplex Pipe Pushing Jacks insure accurate, powerful and economical pushing of pipe under paved streets, alleys, tracks, lawns, sidewalks, draining roadbeds, etc. Pipe can be pulled for lead pipe and duct installations, etc., or "backed out" by reversing the carriage. *The tapered steel jaws completely surround the pipe, preventing crushing or flattening.* Built for years of maintenance-free service.

Regardless of the length of pipe pushed, the Simplex is never more than 30″ from the working face—handles standard or short lengths of pipe without buckling or binding. *Use longer lengths of pipe and save cutting, threading and coupling costs.*

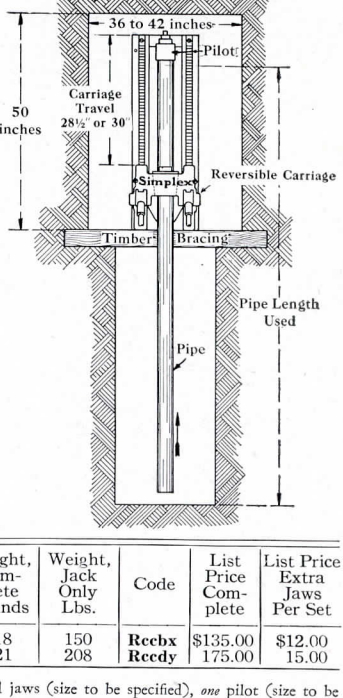
For average soil conditions, we recommend pushing 1″ pipe 25′; 2″ pipe 50′; 3″ pipe 75′; 4″ pipe 100′. Not practical in dry sand.

The R-332R pushes pipe ¾″ to 2″ in diameter when equipped with the proper size jaws and pilots. Like-

wise the R-334R will push 2″ to 4″ pipe when properly equipped. When several sizes of pipe are to be pushed, jaws and pilots must be furnished for each pipe size. Only *one* set of Jaws and *one* Pilot (size to be specified) for handling a single diameter pipe included in the list price.

Operating Instructions for Nos. R-332R and R-334R

Line drawing shows size of trench and cross timbering. Dig trench approximately 8 inches below center of pipe to be pushed. For sighting direction and depth of pipe travel, use 3 sticks or sighting rods of equal length. After pipe has been pushed the full length of carriage travel remove lever bars, disengage pawls from rack bar, loosen jaw and reset.



Jack No.	Capacity Tons	Travel Inches	Weight, Complete Pounds	Weight, Jack Only Lbs.	Code	List Price Complete	List Price Extra Jaws Per Set
R-332R	15	30	218	150	**Rccbx**	$135.00	$12.00
R-334R	25	28½	321	208	**Rccdy**	175.00	15.00

Equipment included—*One* set of tapered jaws (size to be specified), *one* pilot (size to be specified), two 4′ steel lever bars, two steel pipes for extending lever bars.

List prices of Extra Jaws for R332R follow: ¾″, 1″, 1¼″, 1½″ or 2″ at $25.00 each.

List prices of Extra Jaws for R334R follow: 2″, 2½″, 3″, 3½″ or 4″ at $35.00 each.

List prices of Pilots: ¾″—$2.00, 1″—$2.60, 1¼″—$3.00, 1½″—$3.10, 2″—$3.45, 2½″—$4.40, 3″—$5.25, 3½″—$6.30, 4″—$6.95.

An adapter, furnished at $33.00 in addition to the list price of the R-334R, enables it to accommodate jaws to push ¾″ to 2″ pipe.

Simplex Jacks

Track (or Trip) Jacks
Single and Double Acting

Fingering Track (or Trip) Jack pawls to lower the load notch by notch is the principal cause of jack accidents. Track (or Trip) Jacks, unless used by experienced operators, are recommended for track maintenance and construction only. The manually operated safety trip controls the tripping of the load.

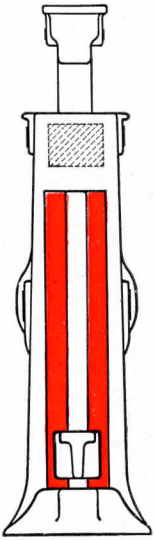
All Simplex Track (or Trip) Jacks have the following practical features:

1. Electrided gibs minimize wear caused by the rack bar toe bearing against the malleable frame. Please refer to the red sections in the line drawing. Electriding, exclusive with Simplex, transforms the malleable iron housing gibs from 130 Brinell (hardness) to 429 Brinell. Tests prove that three times the surface hardness results in five times the service life.

2. *The large hardened steel plate* which is inserted in every housing *prevents internal wear* (note cross-hatched section in line drawing).

3. The fulcrums are 1″ diameter trunnions that are an integral part of the lever socket. They are accurately machined, polished and heat-treated and are unbendable and unbreakable.

4. *Large arched inner-ribbed bases* insure a firm unbending foundation.



5. *Square sockets* are recommended for track work for use with lining bars as levers, and they will not wedge in or stick in Simplex lever sockets.

Both oval and round sockets and oval and round second-growth hickory lever poles can be furnished. Oval hickory poles are stronger than the round as they have a greater cross-sectional area and because they cannot be inserted across the grain.

6. *The cap lug prevents* finger *injury.*

7. Simplex trunnion bearings and keys. The practical use of trunnions and bearings that retain their lubrication is dependent upon the keying of the bearings to prevent rotative or lateral movement. *Simplex keys are driven into angular slots in the side of bearing and they automatically lock in the frame of the jacks.*

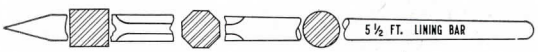
8. *The forged alloy* and high carbon *heat-treated steel operating parts* are carefully machined, gaged, inspected and Brinelled.

9. Every Simplex Track Jack *will lift 15 tons* on the toe of the jack.

(*In 1925 Underwriters' Laboratories* (*Report No. 286*) *rated Simplex Single Acting Track Jacks at 30 tons and the Double Acting Track Jack at 24 tons. Since then, improvements in material and design have increased the safety factor.*)

The foregoing service-proved features produce in Simplex Jacks the *greatest safety, efficiency and ruggedness.*

Recommended for



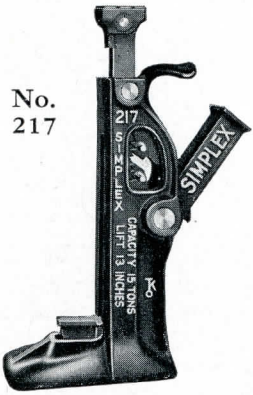
Track maintenance—steel lining bars

Simplex Jacks

Single Acting Track (or Trip) Jacks

Nos. 215, 216, 217 and 218

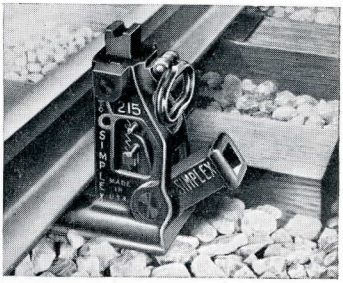
No. 217

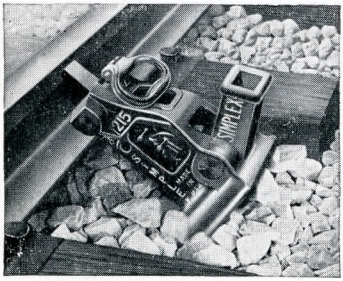


All Simplex Single Acting Track Jacks have a rust-proof *tension spring located squarely in back of both the Lifting and Retaining Pawls* assuring safe operation at any angle. The Pawls are forced into engagement with the teeth of the Rack Bar with a sharp "click" that distinctly informs the operator that the Pawls are meshed.

Nos. 216, 217 and 218 are identical, with interchangeable parts, except for the heights of housings and rack bars.

The No. 215 Surfacing and Lining Jack is the most modern type of Track Jack and weighs 20 lbs. less than the conventional types (Nos. 101 or 217). Built with open type lifting pawl. The 5" lift ordinarily takes care of all track lifting except ballasting.



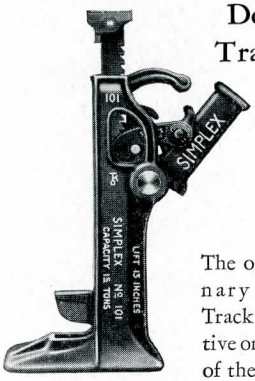


Recommended for tie plate installation. The striking surface below the lever socket, for driving the Jack into surfacing position, extends the full width of the base and is strongly reinforced. (For specifications see page 21.)

Simplex Jacks

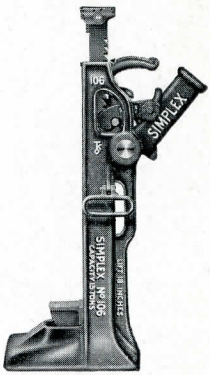
Double Acting Track (or Trip) Jacks

Nos. 101 and 106



No. 101

The operator of an ordinary Double Acting Track Jack is less effective on the upward stroke of the lever as he cannot use his weight and must depend upon his strength.



No. 106

Simplex Double Acting Track Jacks compensate for this condition as they are built so that the upward stroke is on a shorter fulcrum center than the downward stroke. Too, the actual rise of the rack bar is less on the upward than on the downward stroke of the lever. Recommended for speed and ease of operation. They are identical, with interchangeable parts except for the heights of housings and rack bars. There are no lever socket rest lugs on Simplex Track Jacks as they are dangerous, allowing the trip to fall into engagement before the load is ready to be tripped. *Irrespective of the make of double acting Track Jacks you may have in service—you will be safeguarded by chiseling off the Rest Lugs.*

Jack No.	Capacity Tons	Double Acting Height Inches	Double Acting Lift Inches	Toe Lift Min.	Weight Pounds	Code	List Price
101	15	22¾	13	2¼″	60	**Datsq**	$28.00
106	15	29	18	2¼″	80	**Dasqb**	36.00
		Single Acting					
215	15	10½	5	2⅛″	40	**Disqr**	25.00
216	15	17½	8	2¼″	54	**Losqr**	26.00
217	15	22¾	13	2⅛″	60	**Mesqr**	28.00
218	15	29	19¼	2¼″	76	**Hisqr**	36.00

Furnished with square lever sockets and without lining bars.

When oval or round sockets and oval or round hickory poles are desired, add $1.00 to the list price.

Track (or Trip) Jacks

OPERATING INSTRUCTIONS

Don't set the jack in tripping position until ready to trip the load.

Remove the lever from the socket after the lift is made.

MAINTENANCE

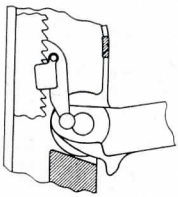


Fig. 1

Check overplay—when the pawl clicks into position the socket stop (Fig. 1) should be at least ½" away from the housing on both the up and down strokes. If there is less space than this, the clearance should be checked by inserting a 5/64" feeler in the space between rack tooth and pawls tooth with the socket in "click" position. If a 5/64" feeler will not enter, wear is indicated and the worn parts should be replaced before using the jack further.

Fig. 2

Check the spring "click" of *Single Acting Jacks* frequently (Fig. 2) as the spring controls proper meshing of the pawls with the rack bar teeth.

Keep teeth clean and pawl seat free from grit (Fig. 3).

Fig. 3

Grease trunnion bearings at least once a year (depending on the amount of use). The rack bar should be greased on all except the toothed side.

Repair

Write for Repair and Maintenance Catalog No. 45.
Repaired jacks should be tested before going back into service.

Rail Pullers and Expanders

Nos. 550, 550A and 555

Railroads effect real economies with these Rail Pullers and Expanders. They cut costs by saving time and material on the following jobs:

Lining crossings and switches;
Renewing insulated joints and end posts;
Pushing or pulling continuous rail lengths;
Controlling expansion and contraction.

No. 550

One man with a Rail Puller and Expander takes the place of a rail pounding crew. *No more battered rail ends, bolts or crossings.*

Service need not be interrupted when the 550 (25-ton) or 550A (30-ton) is used as the alloy steel, heat-treated U-Bar stiffens the joint, permitting train service. The U-Bar fits the web of the rail, like an angle bar, and with the Rail Puller and Expander Lever Socket "locked down", nothing protrudes above the head of the rail. The U-shaped Bar is a necessity for track lining and should be greased on both sides and applied on the same side as the operating mechanism (which is always on the outside of the rail). The washer plates are applied on the opposite side to the mechanism to cut down the amount of travel necessary to tighten the nuts. *The U-Bar will fit any rail having a dimension of 3¼" or more, measured under the ball of the rail to the flange at the top of the web. Special bars can be furnished for smaller rail.*

The screw of the 25-ton No. 550 is 2" in diameter. The studs are ⅞" or 1".

The screw of the 30-ton No. 550A is 2¼" in diameter. The studs are 1⅛", 1 3/16" or 1¼".

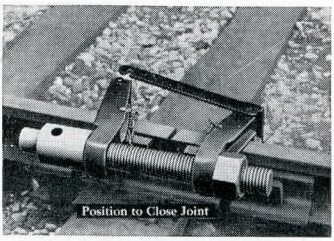
Rail Pullers and Expanders
Nos. 550, 550A and 555

The No. 555 is quickly applied and taken off the rail. In pulling, to close the joint, the arms are "toed-out". In pushing, to open the rail joint, the arms are "toed-in". *It is not necessary to remove the joint bar as the No. 555 is designed to clear the joint bar and bolts at the rail joint.* All bolts in the joint should be loosened before applying the Rail Puller and Expander.

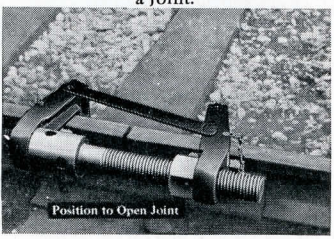
The mechanical action of this tool is *cam* pressure, not the *wedge* principle. The tool, therefore, can be quickly taken off the rail by a reverse turn of the operating screw as the dogs do not "wedge-in". For rails lighter than 85 lbs. per yard, shims should be placed on the side of the rail opposite the dogs. Place shims on top of rail if necessary to raise arms above joint bars.

Recommended for rails weighing less than 100 lbs.

Before proceeding to open or close the rail joint, be sure to disengage the tie bar.



Simplex No. 555 pulling rails to close a joint.



Simplex No. 555 pushing rails to open a joint.

The simplicity of design and related low cost make it a section tool of first importance. Use the tapered end of your lining bar as a lever.

No.	Capacity Tons	Travel Opening Joints Inches	Travel Closing Joints Inches	Weight Pounds	Code	List Price
550	25	4½ to 8*	4½ to 8*	87	**Eeout**	$132.00†
550A	30	4½ to 8*	4½ to 8*	91	**Eeoax**	145.00†
555	15	8	5	44	**Eeexy**	53.00

*Depending on rail drillings.
†Complete with U-Bar, two washer plates and nut wrench.
Deduct $20.00 from the list price if the U-Bar is not required.

Simplex G-Y Tie Spacer

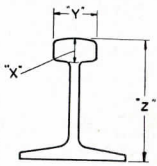
G-Y Tie Spacers are moved from tie to tie by sliding along the ball of the rail. The bracket holds to the ball of the rail when pressure is applied to the tie-lever extension. Ties are easily moved forward or backward into place when the ballast is loosened or the track is raised "out of face." Also used for "pumping rail."

Simplex Tie Spacers are easily and quickly applied and can be instantly removed from the rail by tilting the bracket.

G-Y Tie Spacers have "safety stops" that control the working arc to 45° on either side of the vertical.

Saving Ties from being sledged and reducing man-hours in straightening Ties are only two reasons why thousands of G-Y Tie Spacers are in service.

Built with B, C, D or E bracket for proper rail fit, and with short or long tie lever to center the push against the tie. The handle or tie line extension is 51″.

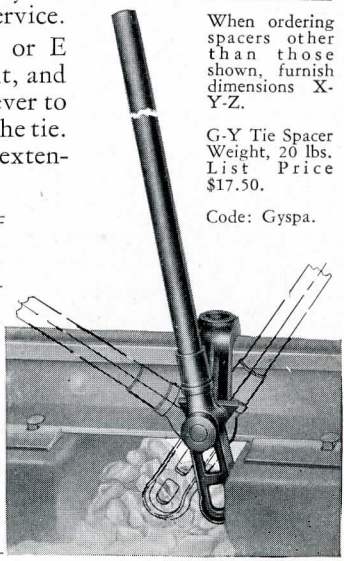


When ordering spacers other than those shown, furnish dimensions X-Y-Z.

G-Y Tie Spacer Weight, 20 lbs. List Price $17.50.

Code: Gyspa.

Type of Rail	Type of Bracket	Long or Short Tie Lever
8020	C	S
8540	B	L
8550	C	S
9020	C	L
9040	B	S
10020	B	L
10030	B	L
10031	B	L
10040	D	S
10523	E	L
10533	D	L
11025	D	L
11225	D	L
12722	E	L
13025	E	L
13125	E	L



Simplex Jacks

Standard Speed Journal Jacks

Low Height
High Capacity and Efficiency
Nos. 1510A, 2510, 3510, and 5010

For inspecting and renewing railway journal brasses, bridge builders, tank and structural steel builders, shipbuilders and all other industries *where powerful jacks of low height are required.*

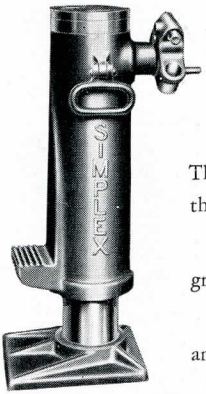
They feature heavy duty chrome-molybdenum steel thrust bearings that are hardened and ground, heat-treated seamless alloy steel elevating sleeve, heat-treated alloy steel lifting screw, heat-treated forged alloy steel gears. Heavy duty bronze elevating nut, bronze bushed pinion shank and screw stem. *No bolts or nuts.* The heat-treated steel lever bar is chisel pointed at one end. Corrugated cap and base are drop forged steel. Housing, shaped for stability, is high grade malleable iron. The ratchet and elevating mechanisms are fully enclosed and dirt proof.*

An average man with the No. 5010 Simplex 50-Ton Journal Jack can lift more than 690 times his weight.

Jack No.	Capacity Tons	Height Inches	Lift Inches	Weight Pounds	Length of Lever, Ins.	Code	List Price
1510A	15	10	5	31	⅞x30	**Aeaoa**	$ 37.00
2510†	25	10	5	35	1 x36	**Beaox**	53.00
3510	35	10	5	41	1 x36	**Ceaoy**	81.00
5010	50	10	4	65	1⅛x56	**Eoaoz**	140.00

*Except the No. 1510A. The No. 1510A has an open type ratchet lever socket.
†Available in light weight alloy.

Simplex Jacks



Standard Speed Bridge and Industrial Jack

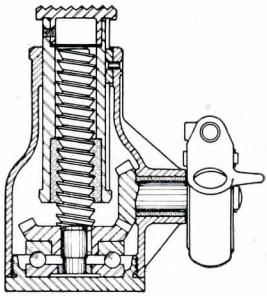
The mechanism is at the top of the Jack, rather than in the base as in Journal Jacks.

The broad toe lift (10 sq. inches) is 4⅜" from ground level when in minimum position.

Also used by contractors, drillers, wreckers and in mill and factory.

Jack No.	Capacity Tons	Height Inches	Lift Inches	Weight Pounds	Length of Lever, Ins.	Code	List Price
2522	25	22	10¼	140	36	**Bebbx**	$140.00

Operation of Standard Speed Jacks



Keep the ram sleeve clean and free from nicks.

The first sleeve groove is to caution the operator and the second groove is the maximum lift.

The positive "stop" prevents the sleeve from running out of the housing, should further lift be attempted.

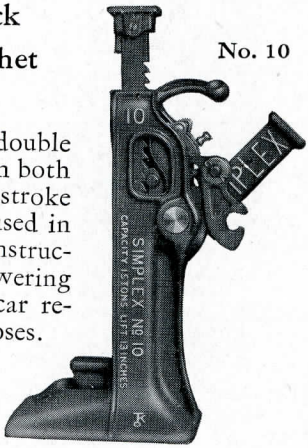
Use fingers to operate the ratchet reversing plunger.

Use proper blocking, particularly when jacking at an angle. Unequal distribution of weight can cause the sleeve to bind.

Wash parts in kerosene, blow out grit and repack ratchet mechanism and gears with high grade ball bearing grease. This should be done at least once a year depending on use.

Simplex Jacks

Combination Track (or Trip) and Ratchet Lowering Jack



This improved Jack is double acting — lifts or lowers on both the upward and downward stroke of the lever. The *trip* is used in track maintenance and construction and the automatic lowering mechanism for coupler, car repairs and industrial purposes.

The "gibs," the section of the housing on which the rack bar slides, are Electrided for greater service.

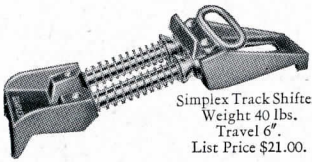
Jack No.	Capacity Tons	Height Inches	Lift Inches	Weight Jack, Lbs.	Code	List Price
10	15	22¾	13	60	**Aoxsq**	$28.00

Furnished with square lever sockets and without lining bars.

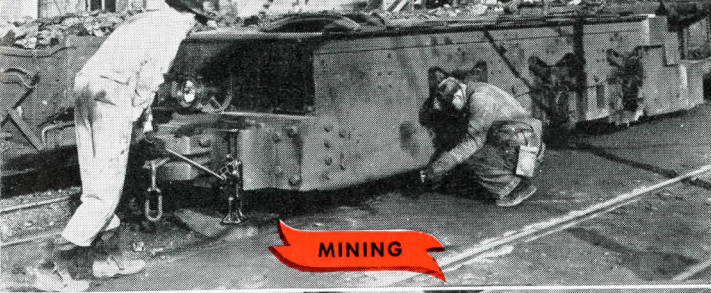
When oval or round sockets and oval or round hickory poles are desired, add $1.00 to the list price.

Simplex Track Shifters

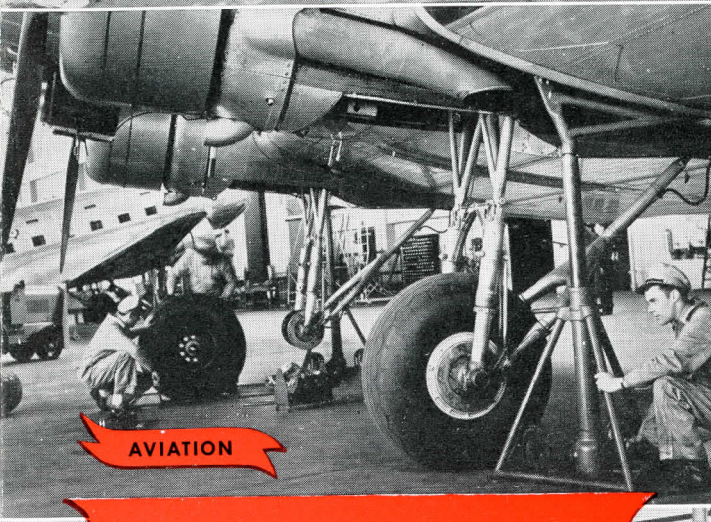
No matter what your track lining job is, the *Simplex Track Shifter will put it over.* Ideal for lining any weight track in any type ballast. Unmatched for lining swings, sharp and flat curves, frogs, turnouts, crossovers and ladder tracks. The only way for lining through short road crossings without taking up one board or digging out the topping. Powered by your track jacks and used in sets of two, the operation of lining this new way requires *only four men.*



Simplex Track Shifter.
Weight 40 lbs.
Travel 6".
List Price $21.00.

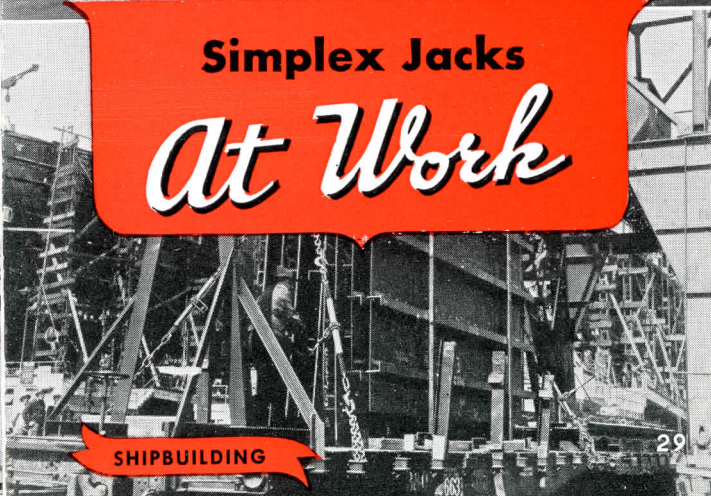


MINING



AVIATION

Simplex Jacks *At Work*



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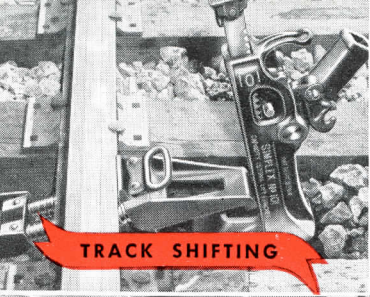
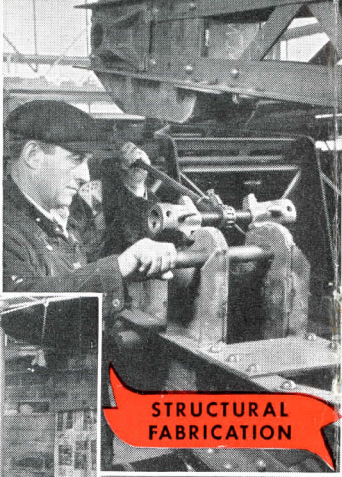

TRACK SHIFTING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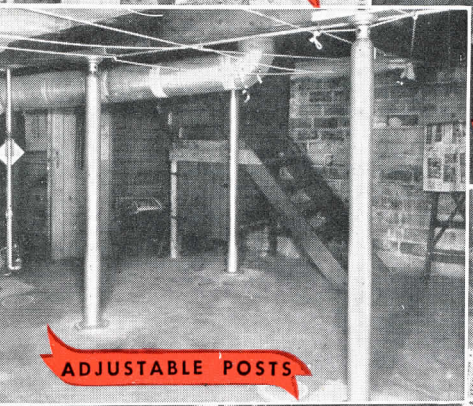
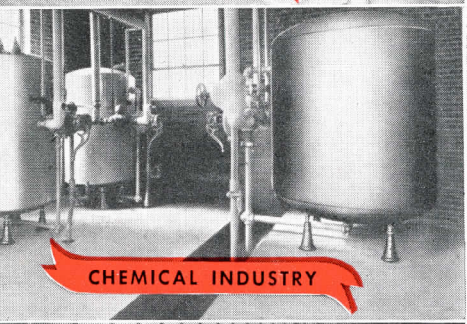
FABRICATION


ADJUSTABLE POSTS

FORGE P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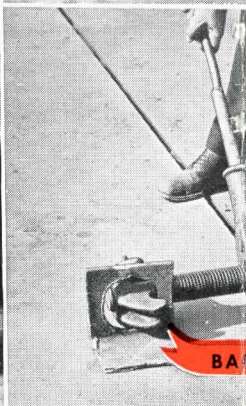
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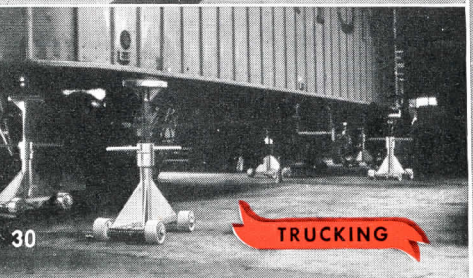
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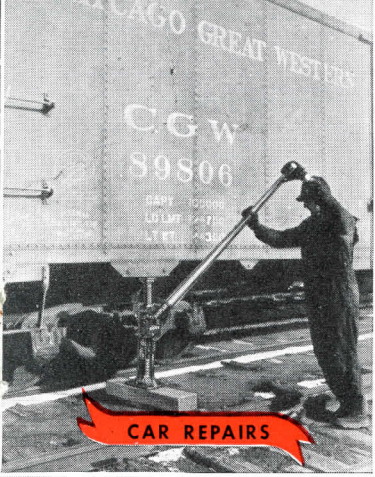
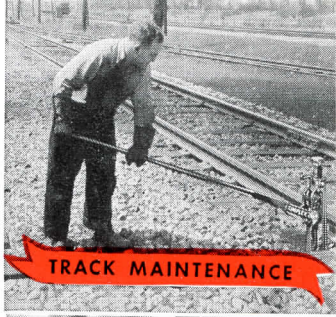
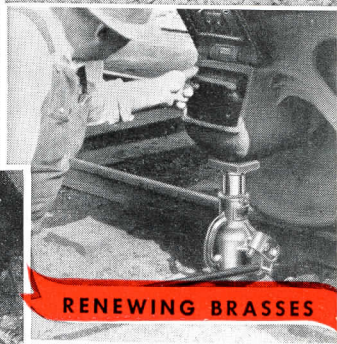


CAR REPAIRS



TRACK MAINTENANCE



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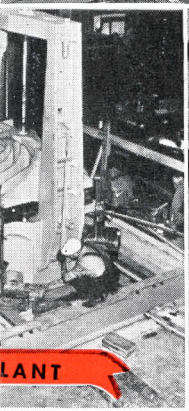

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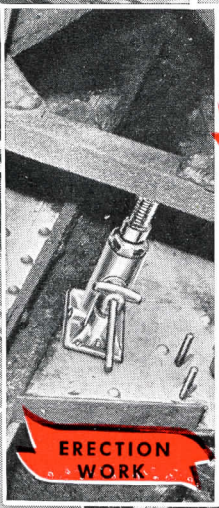
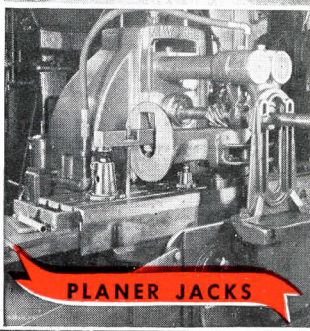
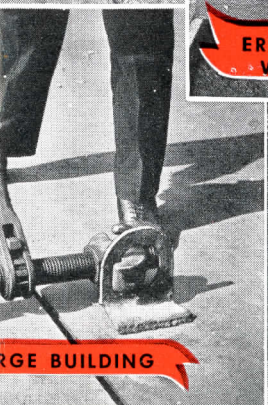


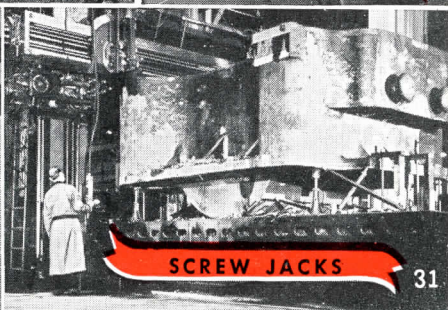
ERECTION WORK



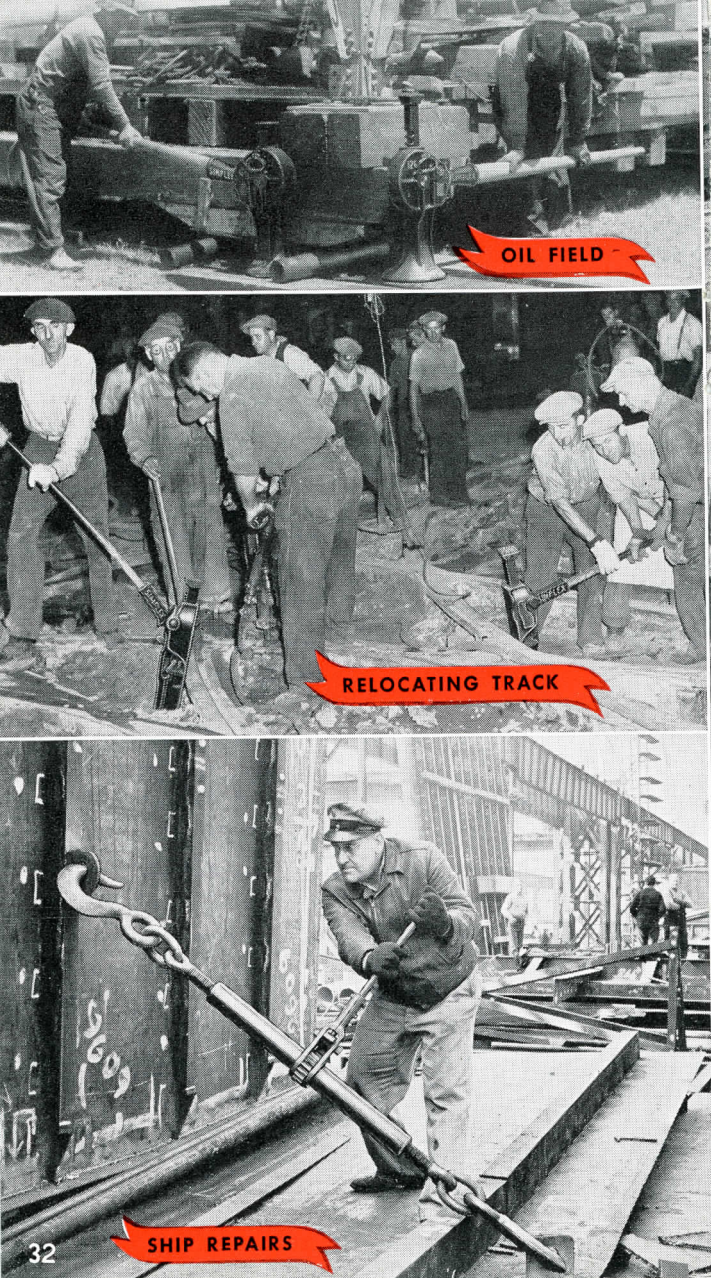
PLANER JACKS



RGE BUILDING



SCREW JACKS


OIL FIELD
RELOCATING TRACK
SHIP REPAIRS

Simplex Jacks

Operating Instructions
Hydraulic Jacks

Be sure to center the Jacks under the load.

Don't lift metal against metal—use wooden shims.

The foundation under the Jack is very important, as the Jack is unduly strained if the load is not lifted straight up. Too, it may kick out from under the load.

To operate horizontally, the arrow (decalcomania) must point up.

After the load has been raised it should be cribbed or blocked. Lower ram after use.

Maintenance

Keep the ram clean and free from grit. Properly positioned oil filler screw eliminates possibility of excess oil.

Use only Simplex Hydraulic Jack Oil—dewaxed pour test—freezing minus 40° F.—do not use hydraulic brake fluid.

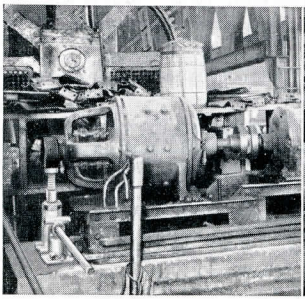
Hydraulic Jack Oil

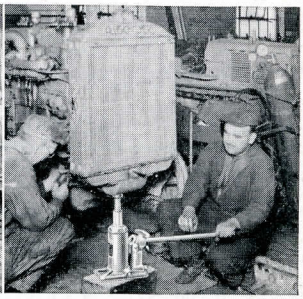
1 pint; weight 1⅛ lbs.	$0.52
1 quart; weight 2⅛ lbs.	.90
1 gallon; weight 8 lbs.	1.77
5 gallon; weight 38 lbs.	7.02

Repair

Write for Repair and Maintenance Catalog No. 45

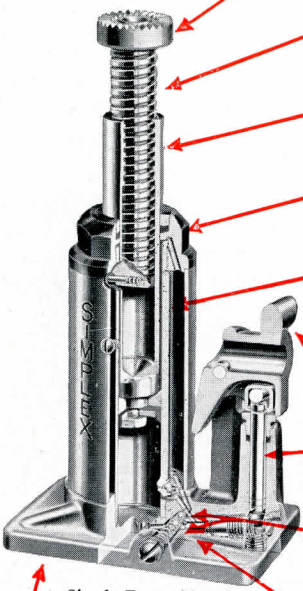
Hydraulic Jacks should be carefully tested before going back into service. They should not only be capable of lifting the load, but should sustain their capacity without lowering rated load in excess of ⅛ inch in 4 hours.





Simplex Jacks

Industrial Hydraulic Jacks



Single Pump Type

Drop Forged Steel Cap. Carburized, hardened—threaded and peened on so that it cannot turn or loosen. It centers the load on sharp, deep serrations.

The Screw. S.A.E. X1112 steel with clean machine cut threads. Spring control limit pin obviates unsafe extension.

The Ram. The heavy section S.A.E. X1112 steel ram is carefully machined and ground to close limits.

The Top Nut. Pressure tested malleable iron top nut is made with wide wrench surfaces for easy removal.

The Cylinder. Made of S.A.E. X1112 steel. Lapped to a mirror finish for close fit and to provide smooth, positive piston operation.

Carrying Handle. Pump socket forms a convenient carrying handle, shifts jack into a convenient carrying position and provides for easy placement.

Long Stroke Pump. Pump is positioned for maximum lift with minimum effort from each stroke. Socket has pin stop to position handle.

Spring Controlled Ball Valves. Oil to and from pump and from reservoir is controlled by quick operating nonsticking spring tensioned ball valves.

Ball Release Valve. A slot head ball release valve perfectly controls lowering action of the jack. End of jack lever operates this valve. No pins or prongs to bend or shear off.

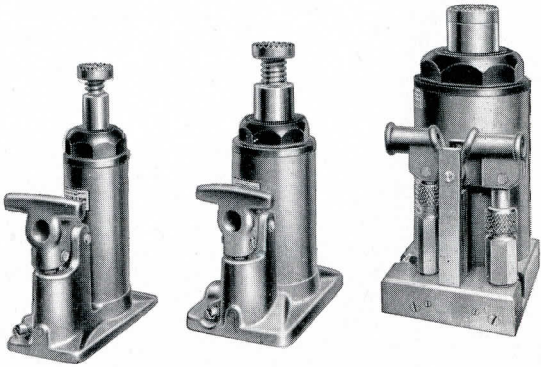
Pressure Tested Base. The tough malleable iron pressure-tested base is press straightened and surface ground to provide a firm footing. Ribbed on top for extra strength.

Pressure and Packing Seals. Made of Neoprene, the modern non-deteriorating oil-repellent composition and high quality leather.

Simplex Jacks

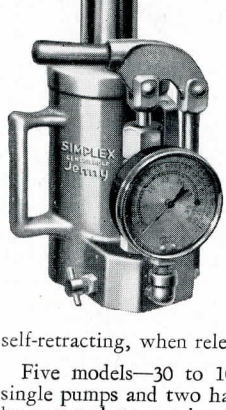
Simplex Industrial Hydraulic Jacks
3 to 50 Tons

Simplex Hydraulic Jacks are made for all heavy duty jobs, each unit being factory-tested to 50% over rated capacity. They are well balanced, can be used in horizontal or vertical positions, ruggedly constructed and feature minimum closed height and maximum lift. Precision tested malleable iron top nut and base, neoprene pressure packing, drop forged steel caps that cannot come loose, leakproof operation and convenient carrying handle are added features. Made in seven capacities. The 30 and 50 ton jacks have high and low speed pumps and double lever sockets and solid bases. For ease of lift in mill and factory, construction, mining, drilling, journal inspection, for trucks, culvert pushing, pipe bending, or can be used as a press.



Jack No.	Rated Capacity Tons	Low Height Inches	Hyd. Lift Inches	Exten. Screw Inches	Total Height Inches	*Net Weight Lbs. Each	Code	List Price Each
3HJ	3	9	6 9/16	2	17 9/16	15	**Chjxy**	$10.45
5HJ	5	9	6 1/2	3	18 1/2	18	**Ehjxy**	13.50
8HJ	8	9	6 3/8	4 3/8	19 3/4	21 1/2	**Hhjxy**	17.85
12HJ	12	9	6 1/16	3	18 1/16	29 1/4	**Abhjx**	29.25
20HJ	20	10	6 7/16	.....	16 7/16	38 1/2	**Bohjx**	42.75
30HJ	30	11	7	.....	18	65	**Cohjx**	65.00
50HJ	50	12	7	.....	19	115	**Eohjx**	147.00

*Net weight includes 1/2" pipe handle, 20" long, (weight 1 1/2 lbs.).
Drilled and tapped for gages. Prices on application.



Simplex-Jenny Center-Hole Hydraulic Pullers

Maintenance, repair and production jobs accomplished in minutes instead of hours. Pulls, pushes, or lifts, and can easily be rigged up as a portable press. Operates vertically or horizontally without side thrust or friction and without the need for heavy auxiliary equipment. Self-contained and light in weight for its capacity. The Simplex-Jenny is its own back up and is self-supporting because of its center-hole construction. The ram is self-retracting, when release valve is opened.

Five models—30 to 100 tons in capacity. Three models have single pumps and two have high and low speed pumps which can be operated separately, alternately, or together. A direct reading pressure gage is standard equipment on the No. 10010 Stern Tube Puller. All other models are drilled and tapped for pressure gages which can be furnished when specified. These gages accurately show the tonnage developed and are useful for load and tensile checking.

Alloy steel pull rods are recommended as Simplex-Jennies will stretch or part any mild steel rod that will fit through the center hole.

Two Simplex-Jenny Pullers, double-headed, will increase the stroke and speed up long pulling jobs. Workmen appreciate their light weight and the ease with which they are rigged up and operated. Built of heat-treated alloy steels to withstand heavy loads and service abuse. Tested for 50% overload.

No. 303 — 30 ton — single pump — is used to pull cylinder liners, to form ship and boiler plates and to straighten out bulges in plates. It pulls bulkheads together, as well as structural members or double bottoms for welding or riveting; eliminates the use of impact wrenches and air hose. Also pulls bolts, rock bits, etc.

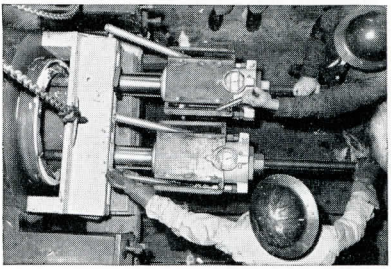
No. 606 — 60 tons — with its double pumps is designed for longer and heavier pulls. It has performed "impossible" tasks in shipbuilding, mines, railroad shops, oilfields, construction and general industry. It is also used for pulling in utility service pipe.

No. 803 — 80 ton and 1003 — 100 ton have single pumps. They are used to pull bushings, cutless bearings, cylinder liners, pistons, wrist pins, valve seats, keys, wheels, sprockets, gears, boiler tubes, pipes, etc.

In shipyards, they are extensively used for pressing on or pulling off propellers and for pulling propeller shaft coupling bolts into flanges. Sledging of bolts, and their consequent upsetting is eliminated, and the tightest possible fit is assured.

Simplex Jacks

No. 10010 Simplex-Jenny Stern Tube Puller



This 100-ton heavy duty double pump unit is espesially designed for pulling in the stern tubes of all types of ships. It is also used for heavy bushing jobs. Valve seats and pistons can be pulled from the largest sump or slush pumps in a fraction of the time required by old methods.

A pressure gage, calibrated in tons for direct reading, is furnished as standard equipment. It comes encased in a sturdy guard to prevent damage in handling and accurately shows the tonnage developed on every job. Shipyards using two Simplex-Jenny Stern Tube Pullers (as illustrated), with two 2-inch diameter alloy steel pull rods, install stern tubes in hulls in less than one hour, including rigging-up time. Only two men are needed for this operation, which previously required a large crew working for several hours. The tonnage developed on these jobs ranges from 75 to 200 tons.

Jack No.	Capacity Tons	Diam. Center Hole	Height Inches	Travel Inches	Weight Pounds	Oil Pints	Code	Price
303	30	1⅛	13	3¼	32	1¼	**Cocxy**	$ 99.00
606	60	2⅛	14	6	92	4	**Fofxy**	175.00
803	80	3⅛	10	3¼	75	2	**Hocxy**	135.00
1003	100	2⅛	10	3¼	72	3	**Aoocx**	135.00
10010	100	2¾	19½	10	225	10	**Aooao**	300.00

Use only Simplex Jenny Hydraulic Oil (Dewaxed-pour test minus 5 °F.)

Simplex Jacks

They Lift Faster, Easier, Safer Because of These Exclusive Features:

Non-slip corrugated, drop forged steel cap with self-leveling 9° float. Positively will not twist out from under loads. A single large chrome-molybdenum steel pivotal ball, nested in a hardened ball seat under cap, centers the load and actually reduces friction 88%. There is no flattening of ball as when load is concentrated on one of a race of small balls. Housings are tough malleable iron to resist breakage due to rough handling and to reduce weight. Bottoms are broad for stability. Handle cast integral adds strength. Safety peep-hole in base prevents turning screw out too far and eliminates measuring. Each jack of a given capacity is painted a different color for quick identification. The chisel-pointed, high carbon, heat-treated, steel bars are 40% stronger than ordinary lever bars and are useful as pry bars, etc.

The Ratchet Head Type have the same general construction as the 4-way Head Type and are recommended for use in close quarters. The strong pawls mesh completely with machine cut ratchet wheels.

Simplex Jacks

4-Way Head Type

Sizes Based on Housing Height

Size Inches	Height When Closed Inches	Operable Rise of Screw Inches	Lifting Capacity Tons, See Footnote†	Manpower Required to Lift Capacity Lbs.	Wt. of Jack Lbs.	Code	List Price Jacks	List Price Chisel-Pointed Heat-Treated Lever Bars
1 x 6	8¾	4½	5	110	5	**Bonef**	$2.60	•
1¼x* 6	9¾	4	10	162	9	**Bofof**	3.10	$0.60
8	12	6	10	162	11	**Bofoh**	3.40	.60
10	14	8	10	162	15	**Bofoj**	3.80	.60
1½x* 8	12¼	5¾	12	192	12	**Bohah**	4.25	.80
10	14¼	7¾	12	192	14	**Bohaj**	4.75	.80
12	16¼	9¾	12	192	16	**Bohal**	5.25	.80
1¾x*10	14¼	7¼	16	248	18	**Botfj**	5.75	1.00
12	16¼	9¼	16	248	20	**Botfl**	6.25	1.00
14	18¼	11¼	16	248	30	**Botfn**	6.75	1.00
2 x 10	14¼	7	20	258	20	**Btwoj**	6.75	1.60
*12	16¼	9	20	258	23	**Btwol**	7.50	1.60
14	18¼	11	20	258	26	**Btwon**	8.25	1.60
16	20¼	13	20	258	28	**Btwop**	9.25	1.60
2½x 10	15	6¼	24	335	33	**Btohj**	9.75	2.40
12	17	8¼	24	335	37	**Btohl**	10.75	2.40
14	19	10¼	24	335	40	**Btohn**	12.00	2.40
16	21	12¼	24	335	48	**Btohp**	13.25	2.40
18	23	14¼	24	335	52	**Btohr**	14.50	2.40

Ratchet Head Type

Sizes Based on Housing Height

2 x 10	14	7	20	204	25	**Brtoj**	16.75	2.40
12	16	9	20	204	28	**Brtol**	17.50	2.40
14	18	11	20	204	31	**Brton**	18.25	2.40
16	20	13	20	204	35	**Brtop**	19.00	2.40
2½x 10	14½	6¼	24	315	38	**Brohj**	20.50	3.20
12	16½	8¼	24	315	41	**Brohl**	21.50	3.20
14	18½	10¼	24	315	46	**Brohn**	22.50	3.20
16	20½	12¼	24	315	51	**Brohp**	23.50	3.20
18	22½	14¼	24	315	55	**Brohr**	24.50	3.20

4-Way Head Type are built in 19 sizes, conforming to Simplified Practice Division of U. S. Department of Commerce.

† The lifting capacities are guaranteed.

• The list price of the 1" x 6" Junior Jack includes the lever bar.

Sizes * conform with Federal Government Specifications GGG-J51A.

Operating and Maintenance Instructions

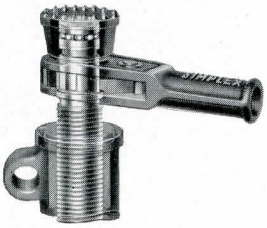
Do not extend the screw beyond the top of the safety peephole in the side of the housing. (At least 1½ times the diameter should always remain in the housing of a screw jack.)

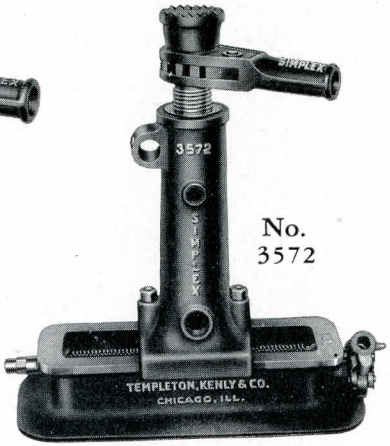
Firmly block the base to lift or push vertically.

Use a wooden shim under the cap.

Keep the threads free from grit and dirt and lubricate with machine oil and use grease under the cap bearing.

Simplex Jacks





No. 3572

Traversing Base Ball Bearing Screw Jacks

Nos. 1060, 2572 and 3572

Simplex Traversing Jacks are built for rerailing and transferring railway locomotives, wagons, trams, cars, bridges and the innumerable necessities of railway, industrial, rigging and mining service—and serve their purpose faithfully and economically. The Base Ratcheting Socket Mechanism (*heat-treated alloy steel*), which revolves the screw forward or backward, can quickly be applied to either end of the screw. The mechanism is simple and dependable. The Screw Bushings, in which the screw of the Jack and the screw of the base rotate, are nickel bronze, which reduces friction to a minimum and increases wearing qualities.

The Base and Housing are Malleable Iron and designed for strength and years of service.

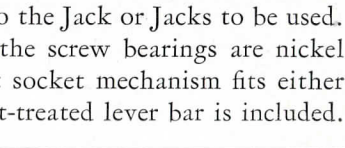
The Peephole in the side of the housing permits the operator to see how *high the screw can safely be extended* without measuring.

The drop-forged, heat-treated steel Cap rests and rotates on a large heavy duty thrust bearing, which is 49% more efficient than the bronze bearing type. Each of these Jacks is equipped with a heat-treated steel lever, one end of which fits the Jack Lever Socket and the other end fits the Base Lever Socket.

Jack No.	Capacity Tons	Height Including Base, In.	Lift Inches	Horizontal Travel Inches	Weight Jack Lbs.	Code	List Price
1060	10	18	8	10	65	**Trasa**	$70.00
2572	25	18	7	12	101	**Trabe**	86.00
3572	35	24	11½	12	137	**Tratw**	101.00

Traversing Bases

Nos. 602A, 572A and 575A

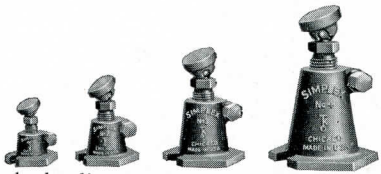


Traversing Bases are built to accommodate Jacks of all types and the Screw Propelled Plate may be drilled to conform to the Jack or Jacks to be used. Accurately machined, the screw bearings are nickel bronze and the ratchet socket mechanism fits either end of the base. A heat-treated lever bar is included.

Base No.	Capacity Tons	Height Inches	Horizontal Travel Inches	Weight Lbs.	Size of Plate Inches	Code	List Price
602A	10	3⅝	12	58	7x9	**Trasr**	$55.00
572A	25	5	15	90	8x10	**Trabr**	58.00
575A	35	5	15	97	10x12	**Tratr**	70.00

Simplex Jacks

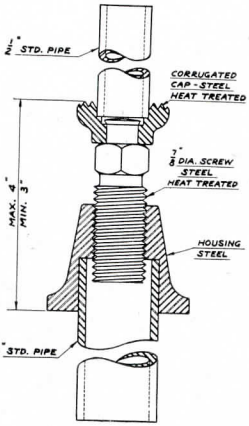
Planer or Machinists Jacks



Simplex Planer Jacks save time and cut costs in machine shops and tool rooms by leveling work on the bed of planers, milling machines and other machine tools. The side lock nut holds the leveling screw at the desired height. The base is notched for fastening to the bed. Ball and socket swivel cap for easy leveling.

Jack No.	Sustaining Capacity, Tons	Height Inches	Lift Inches	Weight Pounds	Code	List Price
1	2	2 3/4	1	1 1/2	**Plana**	$1.90
2	4	3 3/4	1 1/2	3	**Plano**	3.00
3	6	5 1/4	2 1/4	6	**Planc**	4.50
4	8	7 1/3	4 1/2	12	**Pland**	8.65

No. 3A Spreader Jack



This small, sturdy, powerful jack is a necessity for work in close quarters. The cap rotates but does not pivot.

The 3A is 3″ overall when closed, and is easily extended by fitting 1″ pipe in the well of the base and/or ½″ pipe in the cap well. The use of pipe extensions is illustrated. The workmanship is in keeping with the high quality of the material.

Jack No.	Sustaining Capacity	Height Inches	Lift Inches	Weight Lbs.	Code	List Price
3A	3 tons	3	1	1 1/4	**Threa**	$2.00

The No. 3A Jack is furnished with the complete Util-A-Tool Maintenance Set — see pages 46 and 47.

Simplex Jacks

Steel Shoring Jacks

25 and 35-ton capacities

Tough forged steel machine cut screw, cast iron nut and steel bearing plate provide widest margin of safety in shoring work, tunnel roof supporting, timbering, aqueduct work, for use as temporary columns and other construction work.

Furnished complete with nuts and bearing plates. Special nuts and bearing plates made to your specifications.

A 10° tapered hole 3¼″ in diameter is drilled 3½″ deep for the 25-ton series nut, and a 10° tapered hole 3¾″ in diameter is drilled 4″ deep for the 35-ton series nut. The screw holes are 2¼″ and 2¾″ in diameter, respectively, and the depth depends upon the length of screw selected.

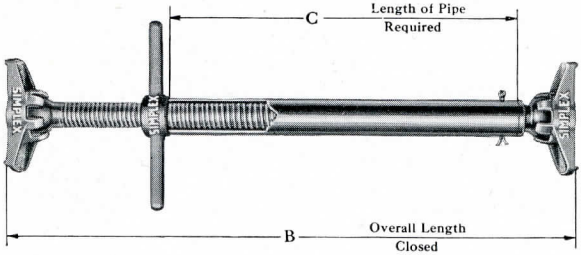
Diameter Screw Inches	Threaded Length Inches	Sustaining Capacity Tons	Overall Height Inches	Weight Pounds	Code	List Price
2	10	25	12	24	**Eoafn**	$6.40
2	12	25	14	26	**Eoafp**	6.80
2	14	25	16	28	**Eoafr**	7.20
2	16	25	18	30	**Eoaft**	7.60
2½	10	35	12½	54	**Eobhn**	9.00
2½	12	35	14½	56	**Eobhp**	9.60
2½	14	35	16½	58	**Eobhr**	10.20
2½	16	35	18½	60	**Eobht**	10.80
2½	18	35	20¼	62	**Eobhv**	11.30

STEEL PLATES

Diameter of Screw, Inches	Size Inches	Thickness Inches	List Price
2	6 x 6	⅝	$4.50
2½	8 x 8	¾	5.00

Simplex Jacks

Drop-Forged Steel Trench Braces



Drop-Forged Brace Complete With Pipe

The only trench and timber braces constructed with drop-forged balls and sockets and lever nut. They are unbreakable, stronger and more durable than malleable braces. The screw is accurately machine cut.

The blunt safety lever nut prevents injuries.

The ball and socket joint at both ends permit quick adjustment *to any angle*. Lugs on the face of the shoes firmly grip the planking. Adaptable to any width of trench by using the proper length of pipe.

They protect pipe-laying crews against cave-ins; eliminate re-digging.

Complete With Pipe

No.	Pipe and Screw Diam. Inches	"A" Length of Screw Inches	"B" Length of Brace Closed Inches	"C" Length of Pipe Inches	Safe Extension of Screw Inches	Weight with Pipe per Dozen, Pounds	Code	List Price with Pipe per Dozen
2	1½	12	18	10½	7	193	**Tbwpb**	$46.00
3	1½	14	21	13½	9	210	**Tbwpc**	48.00
4	1½	14	24	16½	9	218	**Tbwpd**	48.00
5	1½	16	27	19½	10	235	**Tbwpe**	52.00
6	1½	16	30	22½	10	243	**Tbwpf**	52.00
10	2	18	36	26	10	480	**Tbwpj**	102.00
11	2	18	42	32	10	502	**Tbwpk**	104.00
12	2	18	48	38	10	524	**Tbwpl**	106.00
13	2	18	54	44	10	545	**Tbwpm**	108.00
14	2	18	60	50	10	567	**Tbwpn**	110.00

Drop-Forged Brace (without pipe)

Trench Brace Fittings—Without Pipe							Screw Ends Only	Socket Butts Only
No.	Diam. Screw Inches	Length of Screw Inches	Safe Extension of Screw Inches	Weight Lbs. Dozen	Code	List Price Dozen	List Price Dozen	List Price Dozen
16	1½	12	7	164	**Tblpb**	$40.00	$30.00	$10.00
17	1½	14	9	173	**Tblpc**	42.00	32.00	10.00
18	1½	16	10	182	**Tblpd**	44.00	34.00	10.00
20	2	18	10	385	**Tblpf**	90.00	66.00	24.00

3-Way Nut for Trench and Timber Braces

In close quarters, where a lever nut cannot be used to advantage, the Simplex 3-way unbreakable nut, made with three holes to fit a 1″ round steel lever bar, is desirable. No extra charge for this special nut if ordered in place of regular lever nut.

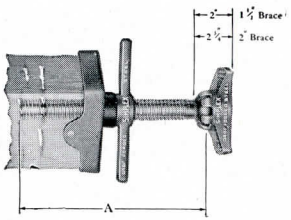
Lever or 3-way nuts.

For 1½″—List price $10.00 doz.

For 2″ —List price $20.00 doz.

Drop Forged Timber Braces

Especially valuable and practical for wide and deep trenches. Also for foundation and subway work. The screw ends are the same as on the Simplex Drop Forged Steel Trench Braces. Timbers are not furnished.



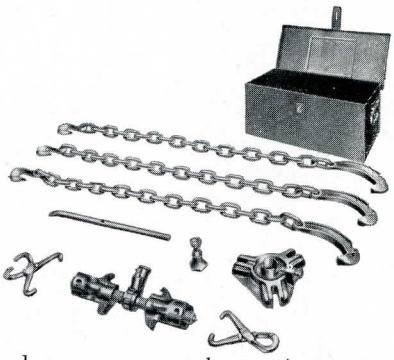
No.	Diam. of Screw Inches	"A" Length of Screw Inches	Size of Timber Caps	Weight Per Dozen, Pounds	Code	List Price Dozen Sets	Timber Caps Only Per Dozen
21	1½	14	4x4	133	**Tbwca**	$47.00	$15.00
22	1½	14	6x6	169	**Tbwcb**	52.00	20.00
24	2	18	6x6	343	**Tbwcd**	86.00	20.00
25	2	18	8x8	353	**Tbwce**	96.00	30.00

Simplex Jacks

Simplex Util-A-Tool

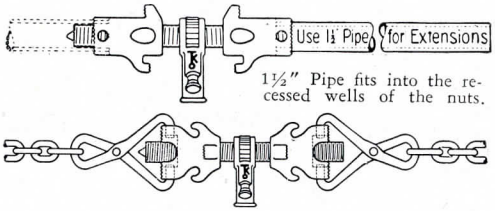
(Trade Name Registered)

"The Tool of a Thousand Uses!"



It saves and saves and saves, on countless maintenance, repair and production jobs. An asset to any shop; a necessity in the field.

It pushes objects apart on the drop forged and corrugated nut ends, or on pipes inserted in nut wells or on the spreading lugs.



It pulls together, using chains with the sky hooks, which are inserted in the nut holes, or on clamping lugs.

It lifts when the triangular snap-on base is attached. Pulls spoked or solid center wheels and gears of any size by attaching the 3-way chain base, centering the live center in the shaft after removing the nut and connecting the 3 chains with the base and object to be pulled.

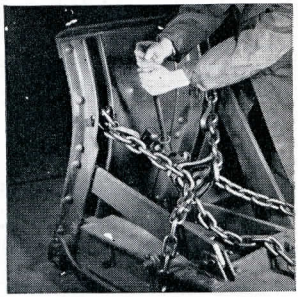
Simplex Jacks

"The Tool of a Thousand Uses"

It clamps parts for welding or assembly; straightens bent objects; bends pipe and structural steel members; loosens and pulls frozen objects; tensions guy wires; holds down portable machines.

Can be used as a 10-ton jack or emergency hoist and performs thousands of other jobs faster, safer and easier. Util-A-Tools pay for themselves many times over in reduced time and labor costs.

Util-A-Tool Maintenance Set consists of a Simplex push-pull jack (10 ton capacity), two drop-forged chrome-nickel steel sky hooks (5 ton capacity), drop-forged 3-way base and wheel puller, and a No. 3A Spreader Jack. Use 1″ pipe in base, or ½″ pipe in cap of No. 3A Jack, for wider spreads.



Straightening Bulldozer Blade

Included also are three ½″ x 40″ chains with forged steel grab hooks and claws (5 ton capacity), forged chisel pointed lever bar ¾″ round and 18″ long, and enameled steel heavy duty tool box, 18″ x 8″ x 8″.

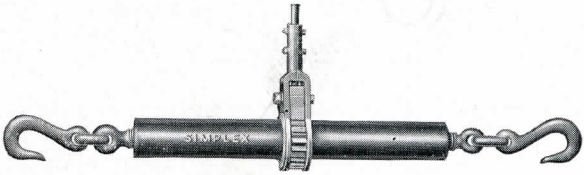
Simplex stud links are optional equipment and list at $1.00 each.

No.	Length Screw Inches	Screw Travel Inches	Weight Each Lbs.	Code Jack Only	Price Jack Only	Code Util-A-Tool Sets	Price Complete Util-A-Tool Sets
610	10	4¾	11	**Puraj**	$15.00	**Faoxq**	$46.30
612	12	6¾	12	**Pural**	15.50	**Fabyq**	46.80
614	14	8¾	13	**Puran**	16.00	**Fadzq**	47.30
616	16	10¾	14	**Purap**	16.50	**Fafqx**	47.80
618	18	12¾	15	**Purar**	17.00	**Fahqy**	48.30

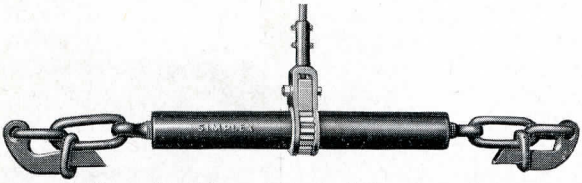
Util-A-Tool with No. 610 weighs 78 lbs. complete.
Add 1 lb. for each size larger (with 612, 79 lbs., etc.).

Simplex Jacks

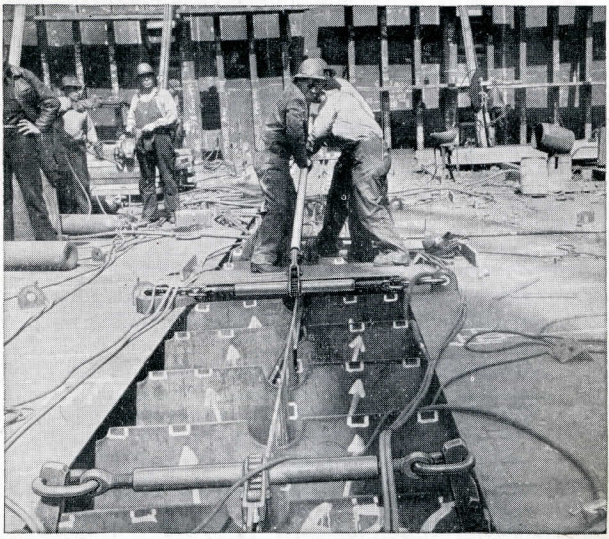
Steamboat Ratchet Pulling Jacks



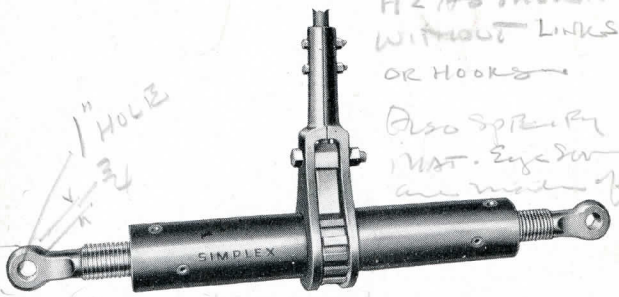
Type "H" is equipped with hooks at each end.



Type "L" has lock-link hook-ends.



Simplex Jacks



Type "E" is equipped with eyes at each end.

Steamboat Ratchet Pulling Jacks

For construction and engineering companies, bridge builders, shipyards, car repairs. Save time and cut costs on coffer dams, concrete and steel construction requiring falsework or framing. Extensively used as a hitching tow on boats, barges and floats; as a guy hold-down for masts and derricks; to tie piling and bents together and for wharf and bridge construction and maintenance. Also used to bind loads of pipe, steel, timbers, etc., on trucks, trailers and flatcars. All types constructed with spring operated plunger which firmly engages pawl or dog with ratchet wheel, insuring safety at all times. By reversing, cables, rope or chains attached to the hooks or eyes are slackened.

Jack No.	Capacity Tons	Diam. of Screw Inches	Closed Length Inches	Travel, Inches	Weight Lbs.	Code	List Price
L2	8	1½	46	20	44	**Lbxyz**	$15.00
L5	15	1¾	48	20	70	**Lexyz**	32.00
L7	15	1¾	60	32	80	**Lgxyz**	36.00
H2	8	1½	48	20	45	**Hbxyz**	15.00
H5	15	1¾	54	20	75	**Hexyz**	32.00
H7	15	1¾	66	32	85	**Hgxyz**	36.00
E2	20	2	30	18	68	**Sbxyz**	34.00
E3	20	2	36	24	78	**Scxyz**	36.00
E4	20	2	48	36	90	**Sdxyz**	42.00

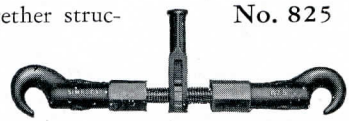
Simplex Jacks

Push and Pull Jacks

Nos. 825, 1040, 1524, 1528 and 1536

8-Ton Puller Jack

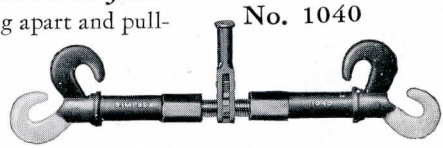
No. 825



Designed for pulling together structural members, for bridge, piling, ship building and dock work, also general wrecking. Strong, easily rigged, made for the most abusive service.

10-Ton Push and Pull Jack

No. 1040



Made for pushing apart and pulling together structural members, for car repairs, for bridge, piling and dock work and general wrecking. End hooks swing 180°.

15-Ton Push and Pull Jacks

No. 1524

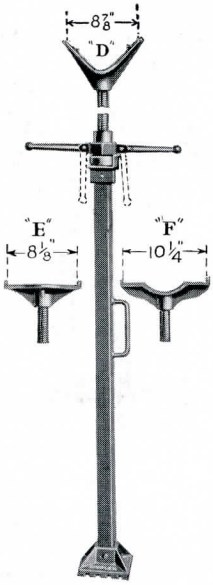
These powerful Push and Pull Jacks are used extensively in the erection of bridges, tanks, forms, and for pulling together or pushing apart structural members, sheets and equipment. Also used for straightening axles, piling, guard rails, spreading or drawing in car sills.

Jack No.	Capacity Tons	Diameter of Screw Inches	Length Closed Inches	Operating Travel Inches	Weight Pounds	Code	List Price
825	8	1½	25	12	38	**Hbexy**	$34.00
1040	10	1¾	40	19	70	**Aodox**	59.00
1524	15	2	24	18	41	**Pusht**	37.00
1528	15	2	28	22	44	**Pumed**	39.00
1536	15	2	36	30	50	**Pulon**	42.00

Deduct $1.00 from the List Price if the Lever is not required.

Mine Timber Jacks

Screw Type No. 139A and 175A



For safe and economical cross-timbering with wood or steel beams. Used as a safety prop under dangerous roof conditions. Powerful, rugged and light. *Saves man-hours and greatly reduces accident hazards.* Also used for renewing mine locomotive brasses when over a pit.

For other uses please refer to the No. 32 Combination Mine Timber Jack and Post Puller shown on page 52.

Capacity Tons		Extended or Maximum Height	Closed or Minimum Height	Weight with Fork, Pounds		List Prices	
Jack Number				Jack Number		Jack Number	
139A	**175A**			**139A**	**175A**	**139A**	**175A**
5	7	9′-6″	6′-6″	60	71	$29.00	$34.00
5	7	8′-6″	5′-6″	59	67	29.00	34.00
5	7	7′-6″	4′-6″	57	63	28.00	33.00
5	7	6′-6″	4′-0″	55	58	28.00	33.00
5	7	5′-6″	3′-6″	50	52	28.00	33.00

These Jacks are furnished with one of the three different heads or forks as illustrated: viz: Type "D," "E" or "F."

In ordering, specify the number of the Jack, size and the type of fork or head.

Code words: No. 139A — Aciax; No. 175A — Ageax.

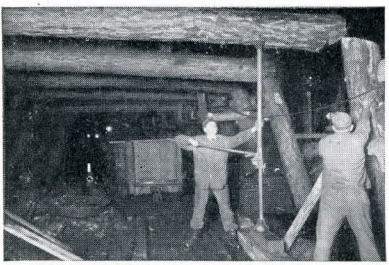
For greater visibility in the mine, Simplex Jacks Nos. 139A and 175A are painted aluminum color.

Mine Timber Jack and Post Puller
Ratchet Lever Type, Single Acting, Automatic Lowering

The most versatile Mine Jack ever built—much speedier for timber work than the Screw Type. Used for putting up cross timbers and steel beams; straightening steel mine cars; as a temporary mine prop in connection with coal loading equipment; putting up and removing the slack in power cable; pulling and pushing conveyor lines and controlling the tail piece; pushing, pulling, lifting, etc.

For pulling, remove the base and fork, attach clevis and chain at the end of the rack bar to anchor the jack; and, to the lug on the jack housing, attach the chain to the object to be pulled. Chain furnished only on request at an additional charge.

Furnished with one of the two forks or heads, with 4-ft. tubing and with 5′ steel lever bar that is tapered and heat treated; also an auxiliary shoe 3″ x 4″.



No. 32

Auxiliary Shoe

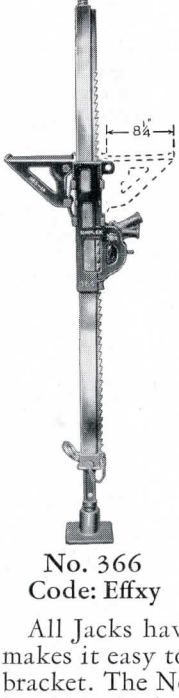
Jack No.	Capacity Tons	Height Inches	Lift Inches	Weight With Fork Pounds	Code	List Price
32	5	52	29	44	**Cbxyz**	$43.00

Deduct $2.00 from list if 3″ x 4″ shoe is not desired.

Simplex Jacks

The New No. 366 Mine Timber Jack

Double Acting — Ratchet Lowering



No. 366
Code: Effxy

Tightens against roof and bottom for safely lifting wood or steel beams. All jacks have instantaneous adjustment at the base, and a ball bearing (drop forged steel) corrugated cap that floats 9° with a 4″ screw adjustment for tightening against roof. Base revolves 360° which eliminates resetting the jack due to obstructions.

Timbers or beams are quickly jacked into place by the speedy double acting ratchet lowering mechanism. The safety speed trigger permits instantaneous housing adjustment on the rack bar, but only when the Jack is not under load.

The elevating bracket may be used as pictured, or as in the line drawing position. The bracket spring compresses to permit pawl to engage after timber is tight against roof. When set up, Jack acts as a safety post.

All Jacks have a minimum height of 24½″ which makes it easy to place heavy timber on the elevating bracket. The No. 366 saves time and eliminates back breaking high lifting that timbermen formerly had to do.

Jack No.	Capacity Tons	Minimum Height	Maximum Height	Lift	Base Extension	Screw Adjustment	Weight Pounds	List Price
366	3	5′-6″	8′-7″	3′-1″	2′-9″	4″	78	$55.00
366	3	5′-0″	8′-1″	3′-1″	2′-9″	4″	75	55.00
366	3	4′-6″	7′-1″	2′-7″	2′-3″	4″	72	53.00
366	3	4′-0″	6′-4″	2′-4″	2′-0″	4″	69	53.00

Furnished with $\frac{13}{16}$″ round x 30″ long lever bar.

Simplex Jacks

Mine Post Pulling Jack No. 327

High Speed — Double Acting
Ratchet Releasing

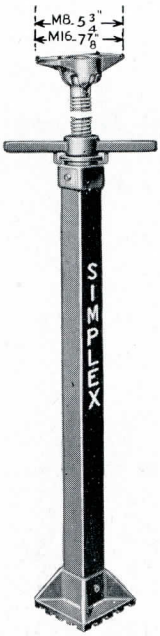
An improved 5-ton Jack that *makes mine post pulling profitable.* In addition to being a powerful, speedy, rugged and safe post puller, this Jack is recommended for pulling together broken chain hauls, drag lines, pipe lines, etc. Handy for stretching heavy cable and trolley wire, pulling crib blocks, taking up slack on conveyor belts and controlling the tail piece; also pulling rails and cars from under falls. The Jack is double acting and has a speed trigger for instant adjustment of slack at any point on the rack bar when the jack is not under load.

Jack No.	Capacity Tons	Travel Inches	Weight Pounds	Code	List Price
327	5	45	36	**Cbgxy**	$30.00

Equipped with 3 ft. of $\frac{7}{16}$" BBB Tail Chain, fitted with a drop forged slip hook and swivel and 4-ft. steel lever bar. (A longer chain is furnished when specified, at additional cost). Weight, 50 lbs.

Simplex Jacks

Adjustable Mine Roof Jacks

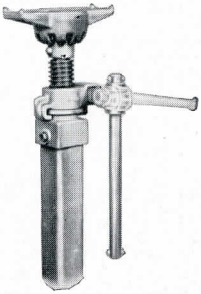


Type "FS"
The Flat Swivel Head is a steel drop forging. (Used with wooden cap pieces.)

M8 with Lever Nut Operating Handle

Type "C" For square and round timbers and large steel beams.

Type "FF"
For small H beams and rails.

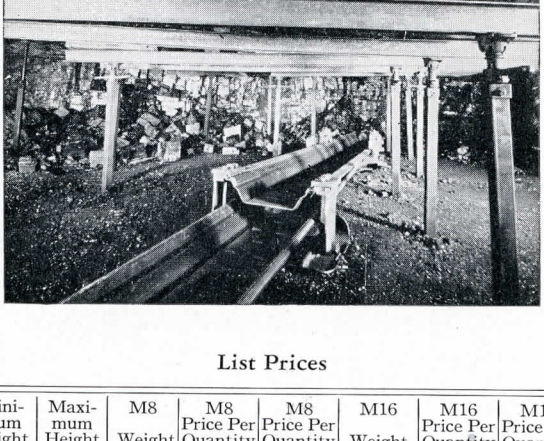


M8 with Combination Slide and Drop Operating Handle

Simplex (the original) Mine Roof Jacks save time and labor with maximum safety in mechanical and hand mining. Easily and quickly set in place where tender draw slate or other soft tops present a hazardous roof problem. *Allow loading machines and conveyors to work in less space.* The face of the working place is better protected by these speedy, inexpensive jacks. Used as temporary supports under cross timbers, steel beams or steel rails and for holding conveyors in place. Sturdy and light in weight. Built in 8 and 16 ton capacities with 3 types of heads and 2 types of operating handles. The lever nut operating handle is standard—*add 50 cents to list price if combination slide and drop operating handle is desired.* M8 and M16 are furnished with square tubing; M9 and M17 consist of screw assembly and base only for your round pipe. Painted *aluminum color* for better visibility in the mine.

No. M8 Light Duty and No. M16 Heavy Duty Mine Roof Jacks

No. M8—8 ton—built with 1½″ diameter heat-treated screw and 2″ square tubing. M16—16 ton—has 1⅞″ diameter heat treated screw and 2½″ square tubing.

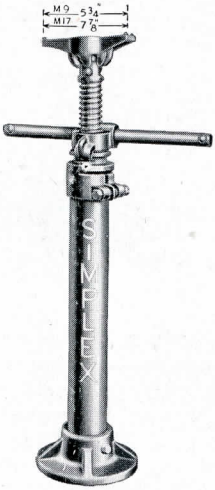


List Prices

Minimum Height Closed	Maximum Height Opened	M8 Weight Pounds	M8 Price Per Quantity 1 to 24	M8 Price Per Quantity 25&Over	M16 Weight Pounds	M16 Price Per Quantity 1 to 24	M16 Price Per Quantity 25&Over
30″	45″	28	$7.75	$7.05	48	$11.90	$10.95
36″	51″	30	7.85	7.20	50	12.05	11.15
42″	57″	32	8.05	7.40	52	12.25	11.30
48″	63″	34	8.20	7.55	54	12.40	11.45
54″	69″	36	8.35	7.70	56	12.60	11.65
60″	75″	38	8.50	7.85	58	12.75	11.80
66″	81″	40	8.70	8.05	60	12.90	12.00
72″	87″	42	8.85	8.20	62	13.10	12.15

When ordering, specify Jack number, minimum height, type of head and operating handle. (When additional heads are required, specify screw diameter.) Longer columns than those detailed can be furnished at an additional cost of 25c list for each 6 inches; but are not guaranteed to sustain rated capacity shown.

Simplex Jacks



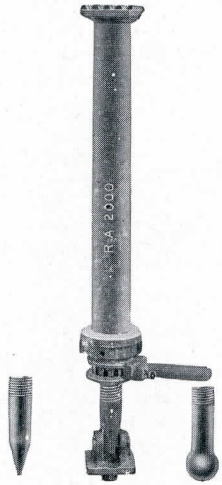
New M9 and M17 Round Pipe Mine Roof Jacks

M9—8 ton—built with 1½" diameter heat-treated screw for use with 2" *standard pipe*. M17—16 ton—built with 1⅞" heat-treated screw for use with 2" *extra heavy pipe*.

By purchasing the screw assembly and base, these Jacks can be universally used in mines having variable height coal seams by merely changing the length of pipe between the screw and base. Reduced inventory and availability, regardless of seam height, are important factors. The screw assembly and base are easily attached to your pipe. Drill pipe 1⅜" from each end with 1$^{17}/_{32}$" drill.

List Prices Do Not Include Pipe	
M9—Weight, less pipe	21 lbs.
M9—Price, per Quantities 1 to 24	$7.40
M9—Price, per Quantities 25 & Over	6.75
M17—Weight, less pipe	36 lbs.
M17—Price, per Quantities 1 to 24	$11.00
M17—Price, per Quantities 25 & Over	10.00

See footnote under M8 and M16 specifications page 56.



Ball Bearing Anchor Jacks

For small, medium and heavy duty shaker conveyor drives, for connecting frames, troughs, guide frames and for use as fulcrum posts.

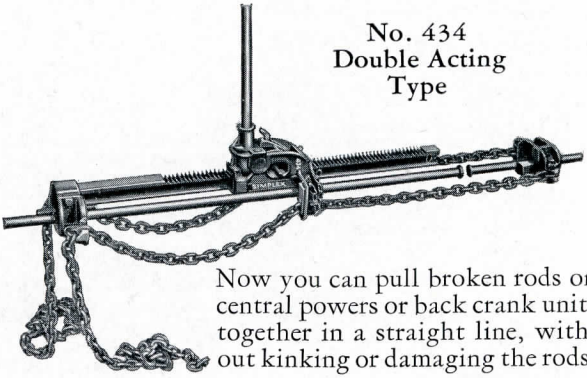
Furnished in Toggle Head, Pointed or Ball End Type with 2" and 2½" diameter screws.

The ratchet assures quick and tight positioning.

Prices and specifications on application.

Simplex Jacks

Pull Rod Jacks for Oil Field Service



No. 434
Double Acting
Type

Now you can pull broken rods on central powers or back crank units together in a straight line, without kinking or damaging the rods.

It's quickly done with a Simplex Pull Rod Jack which is easily carried to the job, attached, and operated by one man.

The equalized pull on the two chains brings the rods together in a straight line so that the "turtle back" can easily be installed. A very important feature is that the slack can be held while the Jack rack bar is extended for additional travel. The positive holding slips and chain wedges eliminate such hazards as kick backs, bruised knees, etc. Extra safety is built into every detail.

No. 434 — for Shallow Wells

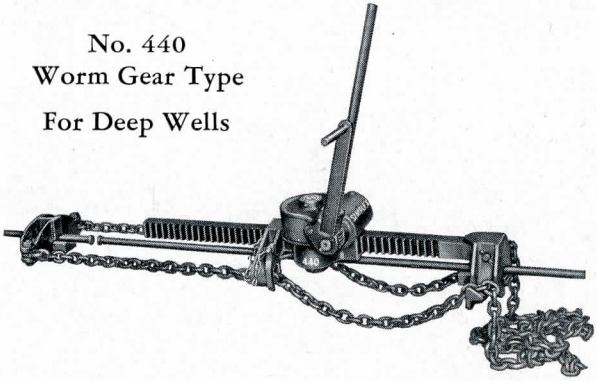
No. 434 has a speedy three ton, double acting mechanism for shallow wells.

Jack No.	Capacity Tons	Travel Inches	Weight Pounds	Code	List Price
434	3	20½	34*	**Dcdxy**	$ 40.00
440	7	22	68*	**Ddoxy**	110.00

*Weight with chains.
Complete with one set of slips for ⅝" and ¾", ¾" and ⅞", or ⅞" and 1" rods; a lever, and two 8′ heat-treated loading chains (¼" for No. 434; 5/16" for No. 440). Additional sets of slips at $10.00 list per set.

Simplex Jacks

No. 440
Worm Gear Type
For Deep Wells



Fully enclosed gear mechanism. The speed crank is used to take up rod line slack. Man-power reduced. Light in weight and sturdy in construction. Improved one-piece slips, easily applied and quickly removed.

The No. 440 will pick up any well easily and quickly regardless of depth.

Operating Instructions for No. 434 and No. 440 Pull Rod and Line Rod Jacks

(1) Connect Pull Rod Yoke about 9″ from the end of broken rod.
(2) Connect Main Jack assembly about {36″ on No. 434 Jack / 38″ on No. 440 Jack} from the end of the other end of the break.
(3) Connect the chains by inserting the chain wedges, making sure that the chains are not twisted.
(4) Operate Jack for full length of rack bar.
(5) Place chains in the slack holders. On the No. 434, reverse the jack mechanism and operate Jack several strokes until load is held by the slack holders. On the No. 440, reverse the ratchet mechanism and proceed as above.
(6) Disconnect chain wedges and slide mechanism back to starting position. (On No. 434 Jack, lift up both pawls with side lug and slide housing back to its original position. On No. 440 Jack, crank ratchet mechanism back to starting position.)
(7) Repeat Operations 4, 5 and 6 until pull rods are pulled together for "turtle-back" installation.

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